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ABSTRACT

This study describes the provision of elementary education in Papua New Guinea. Chapter One briefly discusses streams of primary education, hiring of teachers, education boards, and the ministry of education. Chapter Two describes the existing education system in terms of compulsory education, the structure of the education system, educational planning, teacher education, the inspectorate, radio programs concerning education, community involvement, community schools, the community school curriculum, textbooks and instructional materials, mass media and educational technology, promotion policy, research findings, and special students. Chapter Three offers an analysis of statistics concerning primary education schools. Chapter Four discusses national policies affecting universalization of primary education, including the national development strategy, the national public expenditure plan, educational policy for each year between 1977 and 1980, inclusive, and policies focusing on teacher education, evaluation of the progress of primary education since 1982, training of primary education personnel, and target dates for universal primary education. Chapter Five describes programs and projects originating in the Department of Education and the provinces. Appended are comparative statistics for the years between 1970 and 1983, inclusive. (RH)

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Towards Universalization of Primary Education in Asia and the Pacific

Country Studies

PAPUA NEW GUINEA

PS 016077

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This volume is one of a series of National studies of the progress being made towards the universalization of primary education undertaken by the following Member States:

Bangladesh	Papua New Guinea
China	Philippines
India	Republic of Korea
Indonesia	Socialist Republic of Viet Nam
Nepal	Sri Lanka
Pakistan	Thailand

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PREFACE

Universalization of primary education (UPE) is one of the major priority goals of countries in the region of Asia and the Pacific. The developing countries in particular, are now vigorously engaged in the formulation and implementation of policies, plans and programmes aimed at making adequate and suitable opportunities for primary education available as soon as possible for all children and young people.

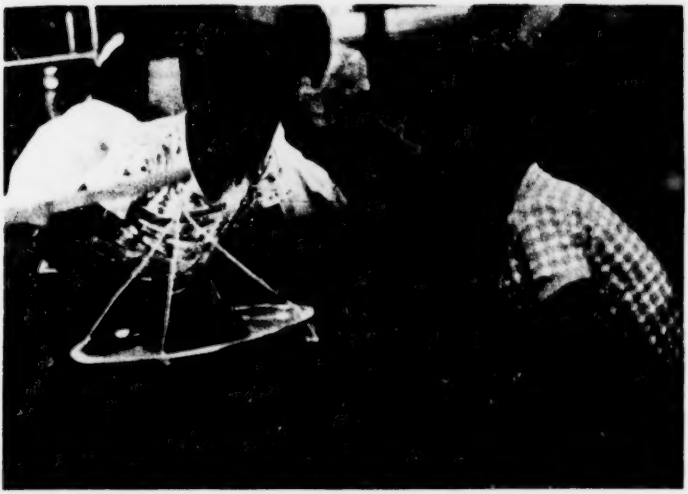
In 1983, as part of a major project under the Asian Programme of Educational Innovation for Development (APEID) on the Universalization of Education, 12 countries in the region undertook national studies. The national studies were conducted to analyse the stage reached by the countries in UPE, and the problems encountered by them in providing educational opportunities to all children at the primary level; to review significant new and current developments in programmes and projects which the countries have undertaken in order to expand and improve primary education; and to contribute to achieving the target of primary education for all children. The studies were conducted by national institutes and professional groups under the guidance of high-level committees of the Ministries of Education in the respective countries.

On completion of the national studies, a Regional Review Meeting was held in November 1983 which undertook an in-depth analysis of the methodologies of the national studies and examined their findings. The meeting also made suggestions for improving and updating the national studies tabled for review.

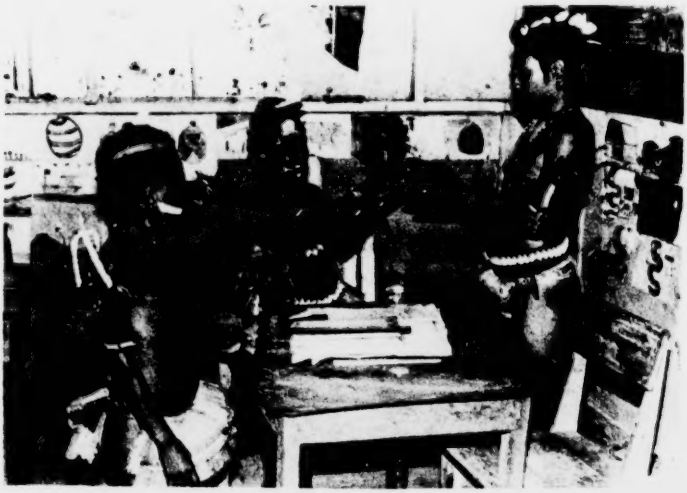
Following the recommendations of the review meeting, study teams in the participating countries have revised and updated the national studies. The present publication is an outcome of the collaborative and co-operative efforts of the member countries in understanding the progress made in the universalization of primary education, the nature and extent of problems and issues and their

implications for achieving UPE in the region before the end of this century.

This series which provides a comparative view of the position of and progress made in UPE has been published with the view that the countries in the region, in their bid to step up measures for UPE, will find the information, experiences and conclusions useful in pursuing the goal of 'education for all' with a new vigor by drawing on the experiences of other countries with the same goals and objectives.



Fellow students work together during a practical session



The parents involve themselves in the school's cultural activities in a classroom situation

Music time for children

Actively working on an agricultural project

Acknowledgement *Photographs supplied by courtesy of the Ministry of Education, Papua New Guinea.*

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Chapter One

INTRODUCTION

The purpose of this study is to present a plan for making adequate and suitable primary education available to all children and young people in Papua New Guinea. To this end the study includes (1) an analysis of the present educational system in Papua New Guinea and the problems faced in providing primary educational opportunities for all children; (2) a review of national and provincial policies and programmes for universal primary education, including the projected time frame and rate of increase in enrolment; and (3) a description of programmes and projects that Papua New Guinea has undertaken in order to expand and improve primary education and move toward the target of primary education for all.

For the purposes of this study "universalization" refers to making educational opportunities available to all seven-to-twelve-year-old children in Papua New Guinea. Such a plan involves the following considerations:

Access. Some children live in areas without schools or alternative learning facilities. They are a deprived group and educational opportunities will not be available to them until school facilities are provided. Other children have schools accessible to them but they do not attend them. This non-enrolment is due to a variety of factors, including a lack of motivation of both parents and children, inability of the schools and their programmes to attract and hold students, and socio-economic factors. In some areas schools do not have adequate teaching staff or basic amenities, or existing facilities are stretched by over crowding.

Retention/completion. Provision of educational opportunities means not only enrolment but also retention of pupils in the learning system in order to help them achieve the standards set for the first level of education.

Achievement. This refers to mastery of the primary curriculum at an acceptable standard. If schools are not able to provide suitable curriculum, children are deprived of full educational opportunity.

This study examines all three of these aspects. Statistical tables and descriptions indicate actual and target access to schools and retention of pupils, as well as levels or achievement.

Children are enrolled in primary school at the age of seven or older. Primary education is provided for six years, covering grades I to VI, after which students are selected to enter provincial high schools for grades VII to X. For the purposes of this study, grade I pupils are regarded as being 7 years old, and the whole primary school enrolment includes children from 7 to 12 years of age. Statistics of primary-school enrolment for this age-group are therefore inflated. There are a few under-age children enrolled, but there are many children older than 12 also enrolled. The figures for seven-year-olds enrolled in grade I are the least reliable. There are a few six-year-olds, many eight-and nine-year-olds and possibly a few older students included. Our data collection is not yet sufficiently refined for us to accurately collate statistics on age.

Streams of primary schooling

Five streams of schooling have been included in the statistics compiled for this paper.

Community schools. In Papua New Guinea the national primary schools are referred to as community schools. The community school system covers about 95 per cent of the enrolment in the country. These schools are controlled by the various provincial governments and each school is managed by a Board of Management made up of community members.

The curriculum is divided into two parts. The core subjects of English, mathematics, science and Community Life (social science) are the responsibility of the National Department of Education, while other subjects are the responsibility of the Provincial Divisions of Education. School inspection is a function of the national government.

International primary schools. These schools are generally run by the International Education Agency, though a few are run by

church agencies. They are mainly intended for the children of expatriates who are living and working in Papua New Guinea, but many Papua New Guinea parents are now enrolling their children in these schools even though the fees are very high. The international primary schools largely follow an Australian syllabus, but they are free to develop school based curricula. The National Government is responsible for inspection of these schools as well, but through a different unit from that for the community schools.

Pre-primary programme. The North Solomons province has developed a two-year programme of pre-primary schooling in the local vernacular. Provincial authorities introduced the programme because, given the high dropout rate after primary school, they felt children should have a longer exposure to school. Normally children enter grade I at seven and leave primary school at 13. In this programme, they enter pre-primary at seven and primary school at nine, and would leave primary school at 15. It was also felt that children should learn to read and write their mother tongue before entering the national system. The results of this pilot programme have been so successful that the province is now planning its expansion. Since for this study all grade I pupils have been counted as seven years old, and so have all those in the first year of this pre-primary programme, the figures for seven years old in primary school in the North Solomons are highly inflated.

Church-run schools. One church in Papua New Guinea runs a complete system of education from grades I through XII comparable to the national system and with the same syllabus. These schools, however, receive no financial assistance from the government and remain completely independent. They have made a significant contribution to national development.

Another church agency, the Evangelical Lutheran Church of New Guinea (known as Elcong) runs a six-year programme of primary schooling in local languages. A full range of subjects is taught, with no textbooks in English. This programme is functioning in only one province and in the past its pupils have been overlooked in national censuses, but in this study they have been included.

The five church agencies (Anglican, Evangelical Alliance, Lutheran, Roman Catholic and United) work in both national and

provincial institutions and are therefore involved with both the National Government and the 19 provincial governments. Co-ordination and co-operation are ensured by mutual consultation on all issues.

Hiring of teachers

Regardless of the grade taught, the type of institution – provincial or national – or the agency running the school, teachers in Papua New Guinea are all employed by the Teaching Service Commission. Its responsibility is to determine the terms and conditions of teacher employment, and ensure that these are applied.

Education boards

The National Education Board is responsible for the administration and management of national institutions. The following are the functions of this Board according to national law:

1. After consultation with provincial governments, to advise the Minister for Education on the National Education Plan;

2. To supervise implementation of the national component of the approved plan;

3. To prepare and submit to the Minister a programme for financial support of the National Education Plan;

4. To advise provincial governments, the Teaching Service Commission, Education Boards and education agencies on any matter affecting the national education system, the efficiency of schools or the welfare of teachers;

5. To allocate quotas of students to all national institutions except those exempt from quotas;

6. To establish national criteria for the selection of students to attend high schools and national institutions;

7. To approve the membership and functions of governing bodies for all national institutions, not excepted from this Act;

8. In provinces that do not have in force provincal laws relating to education.

a) To impose fees on the parents or guardians of students attending those schools and to direct the education

authority responsible for those schools to collect fees so imposed, or

b) In a case where fees are not imposed, to determine the limits within which and the conditions subject to which fees may be charged by education authorities responsible for those schools;

9. With due regard to the expressed wishes of teachers and education agencies concerned, to have responsibility for the appointment, promotion, transfer and discipline of members of the teaching service in national institutions (other than those exempt);

10. To hear and determine appeals from other education authorities in such cases and subject to such limitations and conditions as are prescribed by or under this Act or any national or provincial law relating to education matters; and

11. To hear and determine appeals in cases where the governing body of a national institution (other than those exempt) expels a student or terminates the studies of a student for academic reasons.

In the exercise of its functions, the National Education Board consults, co-operates with and advises provincial governments, Education Boards, education agencies, the Commission for Higher Education and the Teaching Service Commission on all matters in which any of them have common interests.

Provincial Education Boards are charged with the responsibility of administering provincial institutions. Their functions include:

1. In consultation with local government bodies and education agencies in the National Capital District or in a province, to draw up and submit to the National Education Board plans for the establishment and development of schools in those areas.

2. To supervise the carrying out of approved plans in relation to education in the National Capital District or province.

3. To give final approval to the list of entrants to community schools where the number of applicants exceeds the number of places available.

4. To hear and determine appeals in cases where the governing body of a school expels a student and to ensure the representation of all parties involved in the appeal.

5. To determine criteria for selecting students for provincial high schools, select students according to those criteria, and assure that boards of governors enrol students thus selected, taking into account parental preference in choice of schools.

6. To advise and make recommendations as requested by the National Education Board or an education agency on matters relating to education in the National Capital District or the province.

7. In accordance with the wishes of teachers and education agencies concerned, to assume responsibility for the appointment, transfer and discipline of members of the Teaching Service in member community schools, vocational centres and provincial high schools within the National Capital District or the province.

8. When necessary,

a) To impose fees on the parents or guardians of students attending schools and to direct the responsible education authorities to collect fees so imposed,

b) In schools where such fees are not imposed – to determine the limits within which and the conditions subject to which fees may be imposed and charged by the education authorities responsible.

9. According to the direction of the head of the department responsible for financial matters, to administer and account for any funds that may be committed for special purposes.

10. To collaborate in organizing and providing adult education in the National Capital District or a province.

11. To approve the membership and functions of governing bodies of member schools.

12. To take responsibility for the selection of teachers in the National Capital District or a province to attend professional training courses approved by the Teaching Service Commission.

13. Any other functions in relation to education that are conferred or delegated by or under a national or provincial law, or are necessary for or ancillary to the functions set out above.

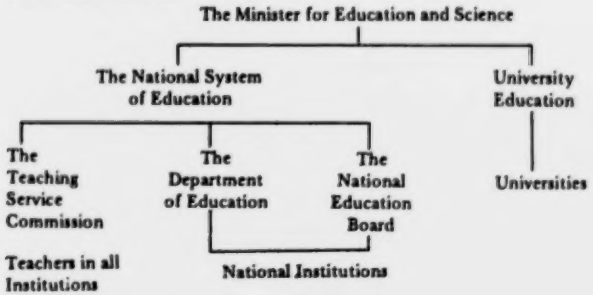
Provincial Education Boards consult, co-operate with, and advise provincial governments, local government bodies, the Teaching Service Commission, education agencies and school governing bodies in the National Capital District or provinces on matters of common interest. Except in staff or individual matters, these Boards are expected to notify the National Capital District or province of their decisions and principles.

The Provincial Education Boards are not empowered to determine the minimum age for school entry, the number of teaching days per year, the number of years of instruction or the maximum pupil-teacher ratio in provincial schools. A provincial government, however, may pass a law empowering it to determine curriculum content, standards and examinations, number of hours of instruction and the language of instruction. Subjects in the community school curriculum are nationally prescribed.

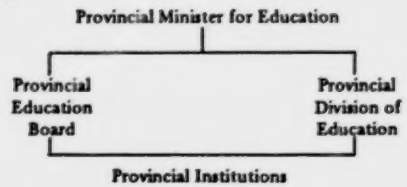
The Ministry of Education

The diagrams below explain the organization of the Ministry of Education at the national and provincial levels.

National Level



Provincial level



Chapter Two

THE EXISTING EDUCATIONAL SYSTEM

Prior to 1940 education was a very haphazard venture in Papua New Guinea. Mainly carried out by mission societies, it usually meant a basic literacy in the local language and numeracy. Some students who mastered these subjects were then introduced to the English language and to enrichment subjects, as well as to basic arithmetic. The extent of their progress depended on the availability and the interests of individual missionaries.

After the Second World War the Australian Administration began to pay serious attention to the establishment of a department of education. The government developed its own system and encouraged churches through grants-in-aid to continue their educational work. Thus encouraged, churches started to develop a system parallel to that of the government. The first comprehensive primary syllabus was developed in 1962 by a committee of leading educationalists in both the government and the churches. Teachers in the church schools had to pass the same qualifying examinations as those in government schools, although the former were trained in church teachers' colleges. All teachers taught the same syllabus, but church school teachers received only a fraction of the salary of government teachers through the grant-in-aid system.

In the mid-and late 1960s, Papua New Guinean church teachers protested this situation. Administrators also began to ask why there were different systems doing the same thing but under such different conditions. There was widespread discussion of a unified system that would still allow diversity.

The Australian Government set up a commission that travelled widely in Papua New Guinea and recommended a system of education that allowed several partners to work side by side, it also recommended decentralization of educational functions and responsibilities. In the late 1960s this proposal was accepted by the Government. The

Education Act passed in 1970 set up Provincial Education Boards responsible to the National Education Board. The subsequent Teaching Service Act established the Teaching Service Commission to employ all teachers in the new national system.

By 1975, when Papua New Guinea gained independence, the country had its own syllabus, and was developing a curriculum that would be even more Papua New Guinean. Though education policies were set nationally, decision-making was decentralized. The Organic Law on Provincial Government of 1978 enabled the National Education Board to delegate necessary functions to new Provincial Governments, who then assumed control of the Provincial Education Boards. A new Education Act was passed in July 1983 to enable every province to develop its own educational policies for the administration of primary schools and non-core subjects in the curriculum, using provincial funds. The National Government mean-while funds primary education under stated conditions.

Compulsory education

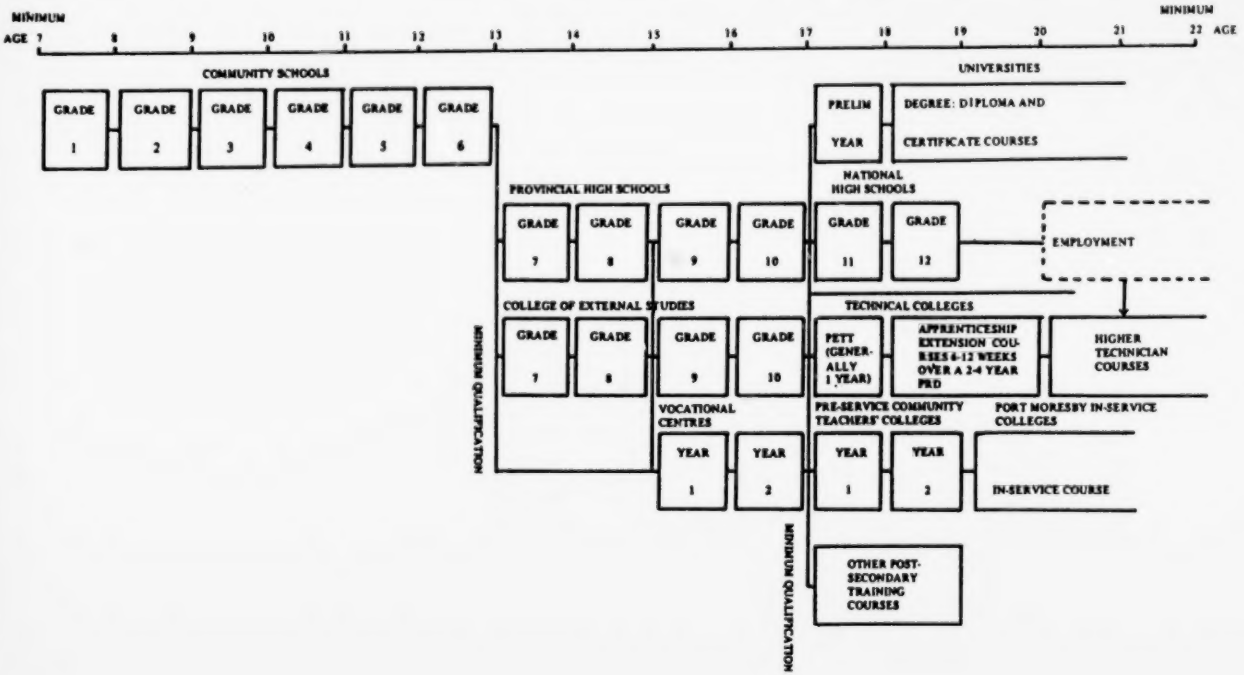
There can be no law for compulsory education in Papua New Guinea as long as the country cannot provide access to schooling for all its children. Provinces can draw up legislation for compulsory education in areas where it regards facilities as adequate for the school age population but enforcement of such policy at present would be extremely difficult.

Structure of the education system

The system of education in Papua New Guinea from primary through post-secondary levels is outlined on the next page.

Educational planning

Provincial planning. The provinces are responsible for planning provincial pre-primary, primary (grades I to VI), secondary (grades VII to X) and vocational (post grade VI) education. They are also responsible for non-formal education for out-of-school young people. The country is only beginning to realize the magnitude of this last task. The graph on page 12 shows that students drop out of school in increasing numbers as they move up from one level to the next.


MINIMUM AGE 7
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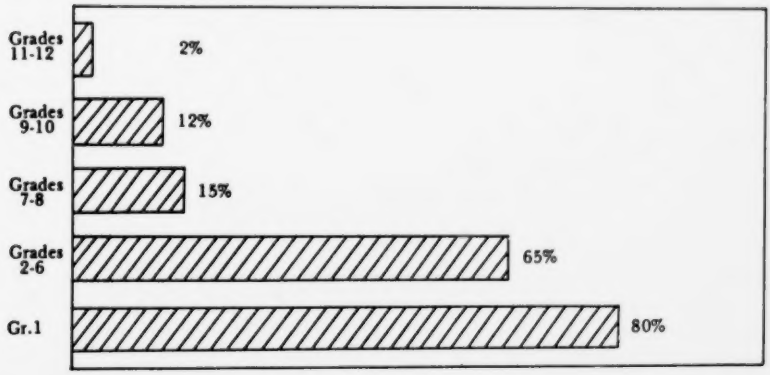
22 AGE
MINIMUM
COMMUNITY SCHOOLS
GRADE 1
GRADE 2
GRADE 3
GRADE 4
GRADE 5
GRADE 6
PROVINCIAL HIGH SCHOOLS
GRADE 7
GRADE 8
GRADE 9
GRADE 10
COLLEGE OF EXTERNAL STUDIES
GRADE 7
GRADE 8
GRADE 9
GRADE 10
VOCATIONAL CENTRES
YEAR 1
YEAR 2
MINIMUM QUALIFICATION
MINIMUM QUALIFICATION
UNIVERSITIES
PRELIM YEAR
DEGREE: DIPLOMA AND CERTIFICATE COURSES
NATIONAL HIGH SCHOOLS
GRADE 11
GRADE 12
EMPLOYMENT
TECHNICAL COLLEGES
PETT (GENERALLY 1 YEAR)
APPRENTICESHIP EXTENSION COURSES 6-12 WEEKS OVER A 2-4 YEAR PRD
HIGHER TECHNICIAN COURSES
PRE-SERVICE COMMUNITY TEACHERS' COLLEGES
YEAR 1
YEAR 2
PORT MORESBY IN-SERVICE COLLEGES
IN-SERVICE COURSE
OTHER POST-SECONDARY TRAINING COURSES

Each province has a primary education Planning Committee headed by an Education Planner. The National Department of Education is training these planners at the University of Papua New Guinea, and Regional Planning Advisors also provide on-the-job training.

School Enrolment



This training will continue at least until 1988. The provincial Planning Committees include representatives from church agencies and have access to a considerable amount of local knowledge. Each committee is responsible for producing a five-year plan that has to be approved by the Provincial Education Board and then presented to the Provincial Government for endorsement. The provinces have seriously examined their systems, identified problems and formulated strategies, although many of them still lack finances to implement these strategies.

The National Government is responsible for training administrators and this is an important need at the provincial level. Rather than appointing education officers with proven experience and some training to administrative positions, some provinces are showing a tendency to promote less able officers.

The National Government sends five senior officers per year for a three-month training course overseas. This has proven very valuable but it is not adequate. The Department of Education is therefore planning to broaden the responsibility of its regional planning advisors to include training as well as educational planning and

administration. Provincial and regional workshops and on-the-job follow-up and training are projected for the next four years.

Equity. The National Government is committed to a policy of equity in regard to educational opportunity in the provinces. It therefore provides annual funds to disadvantaged provinces to help them improve access to primary schooling. These are conditional grants worked on a per-pupil index based on the percentage of children enrolled in school. The pupil index for the most disadvantaged province must be at least six times that of the index for the most advantaged province. When the upper and lower indices are set, those in-between are proportionate to the percentage of the 7-to 12- year-old population enrolled in school. The index is multiplied by the enrolment to give the total grant to the disadvantaged province. The province is then able to decide for itself how to use the funds, which must be spent on primary education. Originally the national government allocated these grants for improving access only, but later relaxed conditions to cover improvement of any of the three aspects of universalization (access, retention/completion and achievement).

The tables on the next two pages outline the allocation of this equity funding in 1983 and 1984.

National planning. The National Government prepares a rolling plan for four years at a time, with annual up-dates. This planning covers the following areas relevant to the universalization of primary education:

1. *The development of teacher education.* The National Government must keep three years ahead of provincial governments in making enough teachers available each year for the expanding primary system. This means the provincial five-year plans have to be studied carefully to assess the number of teachers needed for the nation. An over-supply of teachers with no possibility of employment is not acceptable to the national government and an under-supply is not acceptable to provincial governments. There must therefore be careful planning at all levels.

2. *The inspectorate.* The National Government must supply inspectors to match the growing number of primary teachers. It must also lower the inspector: teacher ratio and must provide extra inspectors for this reason as well.

Equity table for 1983 (In K 000's)

Province	*Percentage of 17-12-year-olds enrolled*	*Money Index in Kina**	*1982 Enrolment*	*1983 Allocation*
Southern Highlands	49.1	6.00	21,427	125.0
Western Highlands	52.5	5.37	22,569	120.0
Enga	53.8	5.12	14,020	70.0
Madang	55.8	4.75	20,713	95.0
Simbu	56.3	4.65	15,311	70.0
Eastern Highlands	57.7	4.40	27,364	120.0
Morobe	60.3	3.91	31,651	120.0
West Sepik	60.4	3.89	11,980	45.0
East Sepik	61.2	3.74	23,368	85.0
NATIONAL	62.5	3.50	321,046	1,130.0
Oro	65.3	3.20	9,507	30.0
Western	68.0	2.92	9,626	25.0
Gulf	68.3	2.89	8,161	20.0
Milne Bay	69.7	2.75	16,564	45.0
Central	71.7	2.55	15,121	35.0
North Solomons	71.8	2.53	15,197	35.0
West New Britain	77.2	1.96	12,557	25.0
National Capital	78.1	1.87	13,630	25.0
New Ireland	78.4	1.83	8,670	15.0
East New Britain	85.5	1.09	19,445	20.0
Manus	86.4	1.00	4,165	5.0

* Approximately 0.84 PNG Kina (k) = One United States dollar.

Equity table for 1984 (In K 000's)

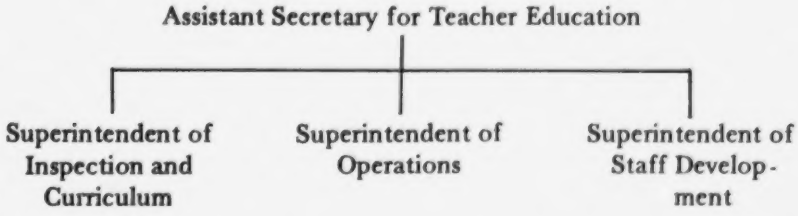
Province	*Percentage of 7-12-year-olds enrolled*	*Money Index. in Kina*	*1982 Enrolment*	*1984 Allocation*
Western Highlands	46.6	7.00	20,039	140.0
Southern Highlands	48.1	6.69	20,993	140.0
Simbu	51.6	5.95	14,041	83.5
Enga	51.9	5.89	13,523	80.0
Eastern Highlands	52.6	5.74	24,943	143.0
Madang	56.1	5.00	20,811	104.0
West Sepik	58.9	4.42	11,678	52.0
P.N.G.	60.9	4.00	312,620	1,300.0
East Sepik	62.0	3.87	23,674	92.0
Morobe	62.4	3.83	32,771	125.5
Oro	62.6	3.80	9,117	35.0
Gulf	66.2	3.39	7,906	27.0
Western	68.3	3.15	9,662	30.5
Milne Bay	68.4	3.14	16,261	51.0
Central	69.9	2.97	14,743	44.0
North Solomons	70.5	2.90	14,926	43.0
West New Britain	76.3	2.23	12,413	28.0
National Capital	78.4	2.10	13,691	29.0
New Ireland	78.8	2.06	8,717	18.0
East New Britain	81.4	1.64	18,518	30.5
Manus	87.0	1.00	4,193	4.0

3. *Curriculum development, especially in core subjects.*

District-level planning. Every province but one consists of several districts. Provinces are strongly encouraged to attempt district-level planning for educational development with an emphasis on disadvantaged districts. Another option would be for the National Government to identify disadvantaged districts and allocate more resources to them, but it is preferred at present to have the provinces carry out such planning. The National Government now requires statistics compiled by district rather than on a provincial basis.

Teacher education.

Papua New Guinea has nine colleges for teacher education at the primary level. Eight of these are pre-service colleges and one is for in-service teacher education. Seven of the colleges for pre-service teacher education are run by churches and one by the government. All are part of the national education system. The National Department of Education provides curriculum input and the inspectorate, and responsibility is divided as follows:


Assistant Secretary for Teacher Education
Superintendent of Inspection and Curriculum
Superintendent of Operations
Superintendent of Staff Development

Each teacher training college has an Academic Advisory Committee which is responsible to the college's Governing Council for the development of curriculum. The Inspectorate and the Education Faculty of the University of Papua New Guinea both have representatives on these Committees. There are also regular workshops for senior lecturers in each subject from all colleges. The curriculum units for core subjects in primary schools also have representation on the Committees and in the workshops. In this way curriculum development and teacher education work together to ensure standards are maintained.

Quite a few lecturers are able to gain higher degrees or work overseas. For some years the University has offered a Diploma

Course for lecturers at teachers' colleges, and the coursework is done partly in Papua New Guinea and partly in the Canberra Advanced College of Education in Australia. It is recognised that if primary school pupils are to attain acceptable standards, great attention has to be paid to the professional development of college lecturers. In 1983 almost half the college lecturers were Papua New Guinean and the other half expatriates; a substantial increase in the number of Papua New Guineans since a few years earlier.

One major problem facing the nation is the low academic standard of the primary teachers colleges. The Government policy is to provide graduates of the lower secondary schools with job opportunities or places in upper secondary and other post-grade X vocational institutions, including nursing, para-agricultural, para-medical and teacher training colleges. With noteworthy exceptions, the applicants for teacher education come from the lower half of the graduating ranks with respect to academic standards. Training colleges therefore are faced with the important task of producing teachers of quality.

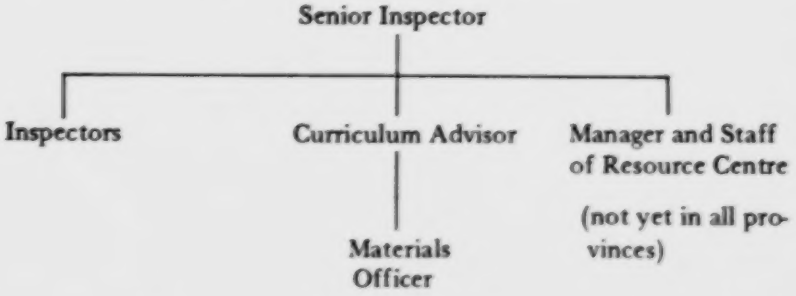
One of the major reasons for the low quality of teacher education applicants is the likelihood of remote postings after graduation. Many of the primary schools are in isolated areas where there are no roads, good houses, good stores or other attractions. Other occupations offer far more congenial circumstances. Remote school allowances are small and are reserved for the very remote schools. Young people in high school are very much aware of this because of their career guidance lessons. Very often teacher education is the third choice of school leavers. Colleges would like to attract brighter students but accept the reality of the situation. At any rate the applicants are from the top 12 per cent of their age group in the country. Colleges in the past have mounted recruitment campaigns in high schools, but these have made little difference in the quality of applicants.

The new intake of teachers' college applicants each year does offset attrition during the two-year course and allow for expansion of the primary school teaching force year by year. Approximately 5 per cent of the teaching force resigns each year and has to be replaced, and the teaching force grows by about 2.5 per cent a year.

Every year over 200 teachers (about 2.5 per cent) are able to attend teacher training at the in-service college. A recent innovation

has been to build offices on the grounds of the in-service college for the primary inspectorate and primary curriculum developers. This means that curriculum developers, the inspectorate and in-service teacher training lecturers can work together closely. This integrated approach should improve the training of teachers and pupil achievement in schools.

The In-Service college is not the only place where teachers receive in-service training. There is also provincially based in-service training. The provinces have professional teams for primary school education according to the following arrangement:



In addition, every headmaster and every senior teacher is required to conduct in-service training for teachers. The typical school in Papua New Guinea is a six-teacher school with the headmaster responsible for grade III, the senior teacher responsible for grade II, and four teachers responsible for grade I.

The senior teacher normally helps to train two of the teachers, the headmaster helps train two teachers and the senior teacher. There are also regular in-service classes run by either the headmaster or the senior teacher. Inspectors check to make sure such training occurs in each school. In addition to in-school in-service training, there is outside training input by visiting school inspectors or members of the provincial professional teams. The reports of the co-operation of such teams are encouraging.

Every year there is a "National In-Service Week" when the Teaching Service Commissioner grants five days leave of absence for every teacher in the country to participate in an in-service programme. In order for resource personnel to be able to help in all provinces, a month is designated during which all provinces have to

arrange their in-service weeks. The national Staff Development Unit originally prepared training material on topics set by the Secretary for Education, but provinces have asked to be able to identify the needs of their teachers and set the topics, so this will be done from 1984 on. These national training courses are usually held in zones of 100 teachers or less. For teachers from schools in remote areas, In-Service Week is a social occasion when they can meet with their colleagues from other schools.

Some provinces also run training sessions for a day or so for selected teachers from up to ten schools brought to a central spot. These sessions may consist of intensive training for teachers weak in certain subjects or of new curricular material. Teachers who attend these courses go back to their schools and share with other staff members what they have gained.

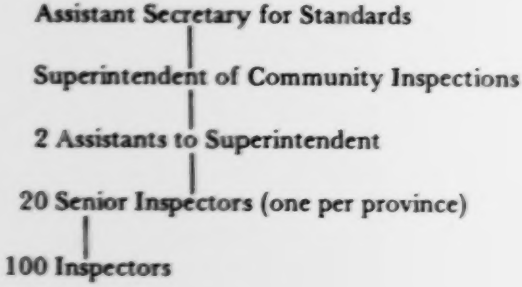
The National Government runs another in-service programme for teachers with supervisory duties. These courses are given in the provinces by the professional teams headed by the Senior Inspectors, and are designed to train headmasters and senior teachers how to supervise junior teachers on their staff.

Assuming more and more importance in in-service training are the teacher resource centres set up in two of the provinces. Officers from other provinces are starting to visit them and it is expected that the centres will be duplicated widely in the next few years. These centres grew out of a need to remedy poor teaching. They are manned by experienced staff who give residential courses of up to a week, evenings as well as days, in areas of teaching identified as weak by the professional teams. The centres also have good reference libraries for teachers and facilities for making teaching aids. The Department of Education has one full-time officer who encourages provinces to develop such centres. Some provinces are interested in more than one centre for maximum access by teachers. The centres are relatively costly to run since teachers must board there during training, but they are proving worth-while.

The inspectorate

This is a national function, although some provinces have expressed an interest in taking it over. The National Government, however, believes it is in the national interest to centralize the function

to improve the standards of primary education. The fact that the Inspectorate will be working more closely with curriculum developers and in-service officers augurs well for the future. The structure of the Inspectorate is outlined below.


Assistant Secretary for Standards
Superintendent of Community Inspections
2 Assistants to Superintendent
20 Senior Inspectors (one per province)
100 Inspectors

This is a large and costly team. Inspectors are usually based in districts. In some districts the cost of transport is high, especially where roads are poor. In many districts there are no roads at all and inspectors have to fly to sub-district centres. All inspectors except those in big towns have to walk as much as a day or more to some schools and this takes up valuable time.

Table 5 shows that in 1983 there were 10,307 teachers in community schools in Papua New Guinea and 121 inspectors (including Senior Inspectors). This is on the average one inspector for every 85 teachers. It is hoped that the number of inspectors will increase over the next few years to bring the ratio down to one inspector for every 80 teachers.

Although the national average ratio is 1:85, it should be noted that ratios vary widely from 1:65 in the Gulf and 1:66 in Milne Bay to 1:102 in the Western Highlands. The Gulf and Milne Bay provinces have very scattered populations with schools far apart, while the Western Highlands is relatively small in area and high in population with a relatively good network of roads. This has been considered in the allocation of teachers. By and large, inspectors are able to give roughly the same professional support to teachers throughout the country.

The duties of the various members of the Inspectorate team are as follows:

Senior Inspector

1. To be responsible, under the direction and leadership of the Provincial Superintendent of Schools for guiding and assessing the implementation of community school curricula in the district and for facilitating a close working relationship between district community school inspectors, curriculum advisors and teaching staff;

2. To advise the Provincial Superintendent, other provincial teaching staff, Provincial Education Board members and other interested laymen on national curriculum requirements, options for local determination of curriculum, and means of developing appropriate courses and materials;

3. As head of the professional supervisory team, to be responsible, after consultation with the Provincial Superintendent, for developing the professional skills of community school teachers in the district in accordance with national and provincial curriculum priorities;

4. To report to the Provincial Superintendent of Education in the district on the performance of particular schools and teachers;

5. Under the direction of the Provincial Superintendent, to allocate advisory/inspectorial tasks to inspectors and curriculum advisors and to implement approved programmes for advisory visits, inspections, in-service work and assessment;

6. To accept personal responsibility for a portion of the inspectorial task of the city;

7. To be responsible under the guidance of the Provincial Superintendent to the National Superintendent of Community School Inspections for the professional development of subordinate staff and the preparation of an annual report on the performance of each supervisory team member;

8. To consult with the Regional Secondary Inspector in matters of district professional development; and

9. To maintain proper control of national funds in the district as regards travel.

Inspector

1. To maintain and improve the quality of education in community schools within his assigned inspectorate;

2. Under the direction of the Senior Inspector, to assist in planning and implementing agreed provincial programmes of professional development of teachers;

3. To develop the skills of individual headmasters and senior teachers in school management through planning and implementation of in-service training;

4. To advance the professional development of teachers;

5. To report as required to the Senior Inspector on schools and the efficiency of community school teaching staff in his inspectorate;

6. To ensure that both national and provincial curricular goals are attained through effective school implementation;

7. To encourage teachers to promote good school-community relationships;

8. To assist the Senior Inspector in planning advisory visits by curriculum advisors to complement the work of the inspectors; and

9. To represent the Senior Inspector as required in matters relating to provincial and national curricula.

Curriculum Adviser

1. To visit community schools in the province and introduce new curriculum and support materials;

2. Under the direction of the Senior Inspector, to visit selected community schools in the province to advise teachers on the effective implementation of national and provincial requirements for the community school curriculum;

3. To develop appropriate support materials as requested by the Curriculum Unit where such need is identified;

4. To prepare, distribute and evaluate appropriate teaching materials and guides, conduct required in-service workshops, and participate in curriculum and in-service committees as directed; and

5. To assist in the professional development of headmasters and teachers as directed by inspectors and the Senior Inspector.

These professional teams attempt to visit each school three times a year, twice to provide advice and once for the scheduled inspection of teachers. In the first two weeks of the first term the inspectors try to visit each school in the district to help solve any problems encountered as school gets under way for the year. While this study was being conducted, inspectors said that it was very difficult to make their two advisory visits because of the vastness of the province, the remoteness of the schools, difficult terrain, hazardous sea travel, inaccessibility of schools in bad weather, or high cost of transport. This meant that they usually made only the one advisory visit and a single inspection visit. The inspector's life is a busy one. Besides his initial and advisory visits, he is involved in the National In-service Week and other in-service training for teachers in his district, and must often attend an in-service course for inspectors.

In the early part of the year teachers apply for an inspection if they wish to have one. The professional team considers requests and determines a realistic number for the year. All teachers newly graduated from college have to be inspected to gain full registration as teachers. Each inspector must cover an average of six teachers. In addition, schools must be inspected and reports written. In the second half of the year teachers are inspected and full reports written on each. Near the beginning of the fourth term, the inspection team in the province holds a mini-ratings conference to discuss every report. Later in the term all Senior Inspectors meet for a full ratings conference to consider reports on all teachers at each level and sort them into satisfactory, unsatisfactory, or worthy of promotion. This is an exceedingly difficult task.

In Papua New Guinea the education inspectors fulfil a dual role. They give professional support to the teachers in their districts and also act as assessors. Sometimes teachers find that the inspectors have difficulty in reconciling these dual roles, but to date no alternative has arisen.

"Education News"

Each province has its own radio station with programmes in the lingua franca or the local language. Almost every province broadcasts at least once a week a programme called "Education News". The education office staff are responsible for this programme, which is part professional advice and part news to inform teachers of what is going on in education in the province. The programme is greatly appreciated by provincial primary school teachers.

The National Department of Education also broadcasts a similar programme once a week during school hours so that teachers can listen to it together. This programme sometimes features interviews with such people as researchers in education, speakers from seminars on education, or writers of recent articles on some aspects of education. The session also advises teachers on subjects of national importance and reminds them of events in the school calendar. These programmes can be useful in promoting the universalization of primary education among teachers and the many parents who also listen to them.

Community involvement

The extent of community involvement in primary education varies widely in the provinces. Some simply require that parents build the schools and teachers' houses and maintain them, and then leave further community participation up to the teachers. Nearly all provinces have Parents' and Citizens' meetings. Many schools involve parents in school nutrition by asking mothers to come on certain days to cook the children's lunches.

The strongest examples of community involvement seem to come through the Boards of Management. These are made up of at least five members of the community served by the school system, the headmaster and one teacher from the pre-school, community school, primary school or vocational centre, and one or more direct representatives of the agency responsible for education in the community. The Boards of Management are responsible for planning, provision and maintenance of school buildings, teacher housing and ancillary facilities; for enrolment of pupils; for setting and achieving school goals; and for making and enforcing disciplinary rules.

Some provinces, like the Southern Highlands, have a more organized approach to community participation. Since 1980 they have attempted to promote the ideas and innovations discussed at Provincial Education Board and Education Planning and Development Committee meetings. Teachers in both community and high schools, members of governing bodies and education agencies, District Managers and Non-Formal Education Officers in these provinces have all been encouraged to participate in the preparation of the provincial five-year plans. Teachers visited during National In-Service Training Week and participants in a number of workshops have also contributed their ideas. Community members have been encouraged to question the rationale for having a community school, and the value of education for girls and school leavers. Other issues have included the problems of schools and school leavers.

It is important that the community be informed and critical about the education of its children, rather than disinterested and passive due to low self-esteem. Some schools in the Southern Highlands have set aside a short period of time each week, often on parents' work day, for members of the community to ask questions of teachers and other extension agents. This School Community Involvement programme involves a dialogue, between participants on an equal footing. The Boards of Management in this province set school goals, build and maintain school buildings, make staff requests to the Provincial Education Board, discipline students, and ensure community support and resources for teaching subjects like traditional handicrafts that are relevant to community needs. Since some districts in the Southern Highlands have the highest drop-out rates in the country, the meetings described above could be used more to address this problem.

In the same province, communities are expected to provide materials for and construct necessary school buildings and teacher housing, and to contribute towards their maintenance and security. In general, teacher housing is inferior to that of any other public servants of comparable qualification. The Southern Highlands Provincial Education Board has recognized this fact and advised Local Government Councils, District Management Teams and education agencies that provision of adequate housing for community school teachers should have funding priority over other classroom, library or high school requests.

Attempts have been made to identify a suitable low cost design that could be purchased in kit form. A number of such "kit houses" will then be inspected and evaluated for duplication.

Community schools

The purpose of community schools is to educate children to live in their communities after they have left school, and to prepare some of them for further education in secondary schools. At one time the main aim of primary school was to prepare children for secondary education and jobs in the towns, but such futures are actually possible for only a few. Education must therefore help children to live in their communities. The fact is that most people in Papua New Guinea live in rural areas, and for many of them there is a better future in such activities as small-scale development of agriculture projects and village handicrafts than in large-scale development in the towns.

Papua New Guinea is not a rich nation and it cannot afford the luxury of buying large quantities of imported textbooks to use in its schools. Teachers will have to learn to use learning materials they can improvise or obtain from the local community. Lessons can often be given just as well using local materials.

A community school is one in which teaching and learning is related to the community and its activities. The curriculum must begin with the activities of the local community and lead to those of the national community, to help broaden the outlook of the students. Teachers should structure their lessons around local activities and involve members of the community in the life of the school.

Some parents will ask why children should go to school if this is not going to help them get jobs. The answer is that a child who can count, read and write has a set of skills that will help him to be a better citizen, build up his community, and in turn make the nation strong. This strength will lead to wider employment opportunities for everyone.

A school that is related to community needs gives parents the chance to become involved with what their children learn at school. This too can benefit the community.

The Five-Year Education Plan pointed out the need for a new direction in primary education. This does not mean that the entire

content of the syllabus must change, but that the attitudes of teachers and the ways schools function need to change. We do not know what knowledge will be most useful ten years or even five years from now, so it is not possible to try to teach now all the knowledge the child will need as an adult. Instead we must try to develop people who enjoy learning and who will be able to learn later in life whatever they need to know. It is not the subject matter that makes one kind of education more valuable than another, but the attitude toward learning that the child is taught. Communities and cultures change. Customs are discarded and communities come in contact with new ideas, new ways of doing things and other cultures. The school, then, needs to be a place where children learn to think, to reason, to discuss and to make responsible decisions.

The community school curriculum

Life in Papua New Guinea has changed considerably since the last syllabus was produced in 1967. To adapt to these changes and to government aims and policies new syllabi have been produced and changes have been made in others.

The Community School curriculum includes the following subjects: community life, English, mathematics, science, health, physical education and expressive arts. These are divided into community-based subjects and nationally prescribed subjects.

Community-based subjects. These subjects include community life, expressive arts, health and physical education. Provincial Governments may, however, choose to develop their own syllabi or vary time allocations for these subjects. They may wish to adapt them to suit the needs of their own communities.

Nationally prescribed subjects. The curriculum for English, mathematics and science is prescribed by the national Ministry of Education. It must be followed by all community schools so that uniform standards can be maintained in these subjects. Teaching examples will of course, still be taken from the local community.

To use this community school syllabus successfully, school personnel must develop a programme that is closely tied to the life of the community served by the school. Community activities must be part of school life and the school must be part of community life. Some community activities will relate to more than one subject and

some subjects are more relevant than others to the local community's activities.

The school timetable includes a section called Blocktime, which is to be used at the discretion of the teacher for remedial work in national subjects or extension activities related to community-based subjects.

Time for outdoor assemblies may be used for saluting the flag, singing national songs, prayer and general announcements. In the lower grades, extra time is given for indoor assembly. This time is to be used for greetings, morning talk, weather and news reporting and health inspections.

Children are to be taught reading and writing in English. There are many arguments for teaching first in the children's mother tongue, but in Papua New Guinea it is impossible to do this everywhere. It has therefore been decided that English will be the language of instruction, although teachers may occasionally use other languages to help explain subjects in grades I and II.

Subjects like community life, mathematics and science help pupils to ask questions and develop ways of thinking. Activities in these subjects are designed to make children aware of the world they live in to understand how things work and how to manipulate them. They introduce ideas such as 'profit' and 'changing customs', use the natural curiosity of children to encourage them to ask questions, and help the children develop skills that will be useful to them no matter where they live or what kind of work they will do once they have left school. Mathematics and English try to teach basic skills and reasoning, and to help children apply this knowledge in practical situations. Health and physical education help children take care of their bodies and develop skills in sports. Expressive arts allows children to express what they are thinking and feeling in different ways through new skills. This subject includes music, singing, dancing, acting, drawing, painting and writing stories.

Christian religious education, related to life in Papua New Guinea, helps children develop a foundation of beliefs on which to build an understanding of life and knowledge of right and wrong. If a common syllabus is agreed upon by the Christian churches and the Secretary for Education, this will be followed in all schools during

the time allocation for Christian religious education. At this time each of the five Christian churches in the national system follows a "core syllabus" developed in 1974 for this subject in their schools. In government schools the Agreed Syllabus for Christian Education in Primary Schools (1970) may be used for mixed classes of children from different churches. In the event that an accredited teacher from a particular denomination wants to instruct children of his own denomination in this subject, the headmaster must be consulted on the best time during the week to arrange this.

It is up to teachers to use the syllabus for each of these subjects as a base on which to build and adapt. They should integrate the subjects with each other and with the activities of the community.

Subject timetable. The day-to-day organization of the school and the planning of lessons must fit into the rhythm of the community. The school cannot expect the community to change to fit in with what it wants to do. Much learning will have to be informal and much of the school timetable will have to be flexible to adapt to the activities of the community at different times of the year. The following are the time allocations provided by the Ministry of Education for nationally prescribed and community-based subjects. Provincial governments may submit plans to vary the syllabus or time allocations for community-based subjects to the Ministry.

Prescribed subjects. These are the minimum number of minutes per subject per week prescribed for all schools.

	Gr.I	Gr.II	Gr.III	Gr.IV	Gr.V	Gr.VI
English	480	585	610	580	550	520
Mathematics	210	210	210	210	210	210
Science	30	30	40	40	60	60

Community-based subjects. These may be varied by the provincial government with the approval of the Ministry for Education.

	Gr.I	Gr.II	Gr.III	Gr.IV	Gr.V	Gr.VI
Community life	150	150	210	240	270	300
Expressive arts	180	180	180	210	210	210
Health	60	60	60	60	60	60
Physical education skills	100	100	100	90	90	90
Games	-	-	-	60	60	60
Assembly	150	150	75	60	60	60
*Christian religious education	60	60	60	60	60	60
Block	155	125	105	40	20	20
Total time	1575	1650	1650	1650	1650	1650

* In church-run Community Schools 30 minutes of Christian Religious Education per day is permitted, amounting to 150 rather than 60 minutes per week. This extra 90 minutes per week can be taken at any point in the day as long as all other subjects, including Block-time, receive their full time allocations.

School broadcasts are included in the suggested time allocations for each subject. For example, radio broadcasts in subjects such as English and health may be taken as part of the time allocation for that subject.

Suggestions for curriculum planning. The syllabus for each subject contains a list of topics to be covered in each grade, and sometimes suggestions for methods and materials to use in teaching that subject, but does not specify the order of introduction of all topics or how much time is needed to teach them (i.e. the pace of teaching). The pace at which the children can work will depend on the difficulty of the topic.

Suggested time schedule for teaching of English

Spoken English

	Gr.I	Gr.II	Gr.III	Gr.IV	Gr.V	Gr.VI
Listening	75	45	45	30	30	20
Radio broadcasts	45	45	45	60	45	60
Talking	100	120	100	100	75	75
Oral expression	45	45	60	60	60	60
Pre-reading & pre-writing	140					
Reading		120	150	150	150	130
Written English						
Written sentences		75	75	75	100	100
Written composition		30	30	30	30	30
Spelling/dictation	75	45	45	45	30	30
Handwriting		60	60	30	30	15
Total:	480	585	610	580	550	520

Teachers are members of a team, and should share the planning of programming among themselves and with headmaster, inspectors and curriculum advisors. In planning the year's work, teachers should find out what the children have mastered of the previous grades syllabus. Revision of those topics can then be incorporated in the year's programme. In English and mathematics, new topics should be introduced in the order suggested in the syllabus. In subjects like expressive arts and community life, work should be planned to fit in with local activities. The yearly curriculum plan will have to be adjusted if teachers find that the students need more time to learn some things or learn more quickly than expected.

Flexibility in teaching and planning is necessary if teachers are to achieve the aims of the syllabus in each grade. In community life and expressive arts teachers may have to change the timetable to suit village activities or change the 'teacher' by inviting craftsmen or other village person to teach the class. In science and health, local materials and examples may be used to replace prescribed teaching aids. In mathematics and English the pace of teaching may have to be changed to suit the needs of the class or individual pupils. Teachers may decide to teach the class together or in small groups, or to give extra help to individual children.

In planning daily lessons from the yearly programme, teachers will need to think of ways for children to find out things for themselves and co-operate with each other. They should encourage children to check answers for themselves, determine whether children have understood what they have been taught, and find ways to relate the lessons in the classroom to real situations at home or in the community.

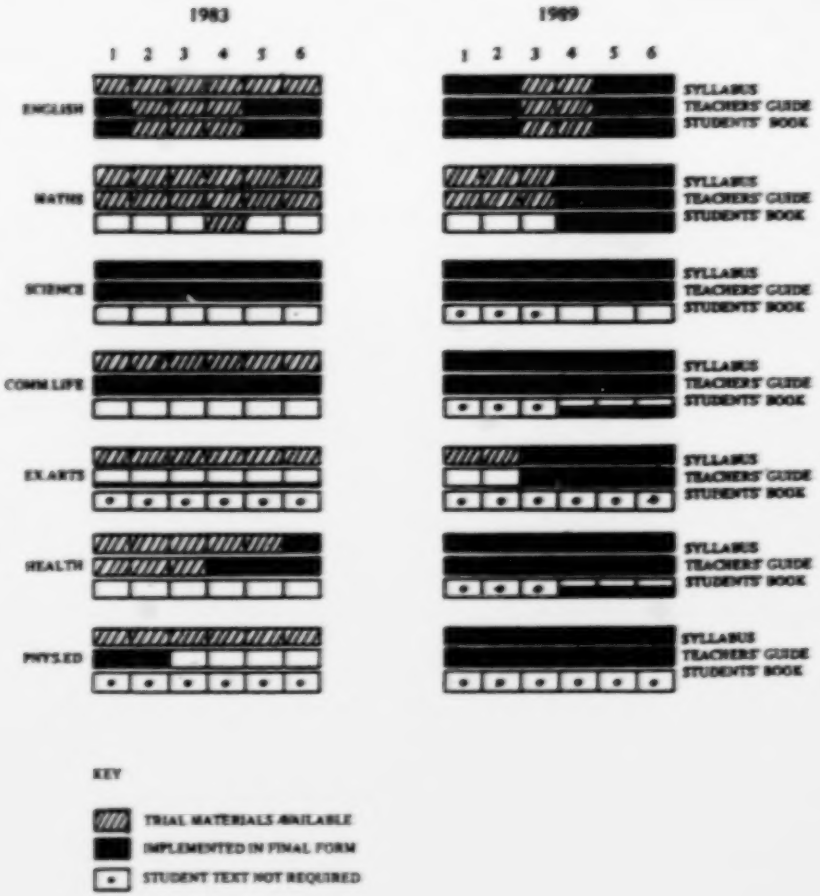
Textbooks and instructional materials

In 1975, just before Independence, a Curriculum Unit was set up to write and produce relevant school materials for Papua New Guinea. The Unit currently employs 13 expatriate writers and 10 national writers and associates. Each writer deals with a particular subject area and co-ordinates a committee of practising teachers who help decide the format and content of books and courses. Final approval comes from the Secretary for Education. The primary syllabus was established in 1977. The following diagram shows what textbooks and teachers' guides are available for each of the subjects in the primary school curriculum.

Pupils have instructional materials and reading books in only one subject, English. These materials are distributed free to all schools and remain the property of the school, but they are in limited supply because of restricted funding. Reading books are normally shared between two or three pupils. Only four or five different reading books are available at each grade level. No student materials are available for any other primary subject area.

In the last couple of years a massive project has begun with the assistance of the World Bank to provide technical staff and

Development of primary materials



equipment to upgrade the production of primary textbooks in maths, community life and health. By 1987 a variety will be available in several subject areas.

The Department of Education has an offset printshop with a staff of 35 to produce all syllabi and teachers' guides in print runs of up to 6000 copies. Textbooks are printed in much larger quantities by the government printer or by commercial printes both inside and outside Papua New Guinea.

Because of the rugged nature of the country and the very limited network of roads, school materials have always been air-freighted from Port Moresby to outlying areas. However, as the production of student material has expanded, it has been necessary to ship textbooks to provincial ports. Each of the 20 provinces has a Materials Officer who is responsible for collecting and storing educational materials and organising their distribution to schools throughout the province. School supplies like exercise books and chalk are distributed through government stores and purchased by provincial governments and schools.

Mass media and educational technology

The Australian Broadcasting Commission initiated school broadcasts for Papua New Guinea during the 1960s and early 1970s. This responsibility was transferred to the National Broadcasting Commission at Independence and formal school broadcasts are now produced by the Curriculum Unit of the Education Department. The Department has increased its technical staff and hopes to update and re-air many of the older school broadcasts.

There are 17 programmes broadcast regularly for primary schools and one for secondary. The School Broadcast Timetable for 1983 is printed at the end of this section. School broadcasts are a very cost-effective medium and particularly suitable to the highly oral nature of Papua New Guinean culture. Regular workshops are held in teachers colleges to train teachers in the use of school broadcasts, and teachers' notes are provided to accompany each programme.

The Department of Education is concentrating at this stage on developing student books, radio broadcasts and posters, and is not actively encouraging schools to purchase more sophisticated audio-visual technology. In fact, it is hoped that the spread of television will be delayed for a few more years until these basic materials are well established. Teachers' colleges use slide projectors, 16mm films and video in their training, but it will be some time before most primary schools have funds, electrical power and suitable storage facilities to make use of such machinery or to purchase sufficient software.

School broadcast timetable 1983

	MONDAY	*TUESDAY*	*WEDNESDAY*	*THURSDAY*	*FRIDAY*
8:45	Christian Education – 6	Let's Use English – 5	Let's Use English – 5	Let's Use English – 5	Dr. Kanini Health Education – 5
9:00	Stories from the bible – 5	Let's Speak English – 4	Let's Speak English – 4	Let's Speak English – 4	Let's Speak English – 4
9:15		Radio Magazine – 3	Radio Magazine – 3	Radio Magazine – 3	
9:30	Health Education – 4	Listening Time – 2	Listening Time – 2	Listening Time – 2	Papa Mai – 5 & 6
9:45	Science – 5	Radio Time – 1	Radio Time – 1	Radio Time – 1	
10:00			Education News		Current Events headlines
11:00	Science – 6	LET'S USE ENGLISH/ENG RAD MAGAZINE-6	LET'S USE ENGLISH/ENG RAD MAGAZINE-6	LET'S USE ENGLISH/ENG RAD MAGAZINE-6	Current Events – 5 & 6
11:30	Community Life – 4	Community Life – 5	Community Life – 6	Serial: Kipa the Dreamer – 6	
1.10		1.10 Literature (Grds 9 & 10)			

TERM 1 BROADCASTS : FEB 7 – MARCH 31
TERM 2 BROADCASTS : APRIL 25 – JULY 1
TERM 3 BROADCASTS : JULY 18 – SEPT 9
TERM 4 BROADCASTS : OCT. 3 – DEC 16

Division of Educational Services
National Broadcasting Commission
P.O. Box 1359
BOROKO

School Broadcast Liaison Officer
Curriculum Unit
Department of Education
Private Mail Bag
BOROKO

Automatic promotion

The community school programme in Papua New Guinea has a policy of automatic promotion. This means that children are not permitted to repeat grades. Boards of Education do allow children to repeat in special circumstances. If they have been sick frequently and have missed too much work, the teacher is allowed to put their cases to the Board. In practice, however, this very seldom happens and very few such cases are even discussed.

While this practice may be psychologically beneficial in that children are not made to feel they have failed and are able to stay with their own age groups throughout their school lives, it does create problems. Research is required in this area to find out the effects of automatic progression. How many children or what percentage of grade enrolments proceed to the next grade without sufficient knowledge to be able to cope with the work of the next grade? How much teacher frustration is caused by too wide a range of knowledge in the class? How can a teacher cope if there is simply too much remedial work to be done? The problem becomes more and more serious as students move into the higher grades. It might be advisable for the provinces to change the national policy they have inherited.

Overview of research

Research in primary education in Papua New Guinea from 1979 to 1983 dealt with four major issues: (1) cultural context, (2) cognition, (3) classroom materials and (4) the role of the teacher. The majority of research focused on cognitive development related to traditional culture. An example of such a study was the 1982 "Indigenous Mathematics Project" co-ordinated by Lacy and Souviney. This project assembled data from over 100 researchers on acquisition of numeracy relating to indigenous counting systems. Piaget's stages of cognitive development formed the theoretical base. Data from over 20 other research reports on school ethnographies in five representative sites, including the evaluation of trial classroom materials, gave direction to the development of primary mathematics textbooks under the Second World Bank Education Loan.

National documents that have influenced the direction of research include *the Five-Year Education Plan* (1977), the *National Education Strategy* (1979), *Policy Hearings for Education* (1977 and

1979) and *the Standards Report* (1982). Special publications relating to primary-level education include *The Right to Learn* (1981) on nonformal alternatives, the *Ministerial Brief on Education* 1982), and the 1979 special edition of *the PNG Journal of Education* entitled "The Community School." Also noteworthy are "The Education of the PNG Child" published by the University of Papua New Guinea and the Education Research Unit reports, "The Role of the Community School Inspector" by Apelis and "The Community Schools Survey" by Cayago.

Geographic and cultural contrasts that influence schooling have been documented by Carrier on Ponam Island, Logan in Siassi, the Burkins in the Southern Highlands village of Muli, Cheetham in the Huli area, and Zeleneitz in Kelenge. Winters, Kemelfield, Delpit, Lancy, Souviney, Weeks and Vulliamy have also contributed to the growing literature on the interaction of school and culture. Randall and Maddock have related student explanations of natural phenomenon to stages of religious awareness and the science curriculum.

Beattie's research on the subject of expressive arts was followed by that of Buck and Mount. Burse and Monia have looked at the teaching of agriculture in the primary school, Hecht at religious instruction, Roberts and Kada at mathematics, Wilson at science, Jones and Newton at physical education, and Watson at community life topics.

Varmari has investigated the community school syllabus and the inspectors. Smith, Cares and Power have completed research on teachers' perception of primary schools. Surveys of teaching materials and the needs of community school teachers have been made by Anderson and Aarons. Professor Downing from the University of British Columbia has studied reading needs in community schools. Moore has looked at classroom interaction in an urban International Primary School and has begun a three-year research project on English instruction in grades I and II.

The national focus on decentralisation has been studied by Grieve and, more thoroughly, Bray. Urbanization and schooling have received some attention from Guthrie. Solon has reported on the medium of instruction in community schools. Delpit and Giggs have

concentrated on the feasibility of establishing pre-school vernacular schools in two provinces.

Enrolment ratios, causes of attrition and equity levels between provinces have been investigated by Bray, Sheret, Weeks, Kemelfield and Guthrie (in the North Solomons); by Gould, Dixey and other visiting Unesco consultants; and by the Planning Services Division of the National Department of Education.

Physical fitness surveys have been carried out by Drs. Dietrich and Olsen. Surveys on nutrition, availability of school lunches, and physical handicaps have been co-ordinated by the Planning Services Division.

Special groups of primary students

There are important distinctions between urban and rural primary school conditions in Papua New Guinea, but to date statistics for these areas are not recorded separately. Provinces are being encouraged to plan by districts and will be taking this distinction into account.

Until 1983 there was no financial assistance for physically and mentally handicapped children in the country since funds for regular primary education were already scarce. A study is now being made of the size of this special population. Church and voluntary agencies have shown interest in this group of children over the years and have started a few schools. Their efforts are beginning to be recognized by the present Government through grants to help them in their work. Government policy is not to open schools of this nature within the national education system, but to continue giving financial assistance to the voluntary agencies working in this area.

Chapter Three

ANALYSIS OF PRIMARY EDUCATION STATISTICS, 1983

At the end of this chapter is a series of 21 tables of basic primary education statistics for 1983 in Papua New Guinea. School statistics are prepared monthly and forwarded by headmasters to the provincial education offices, where they are collated. In most provinces since 1983 statistics have been compiled on a district basis. In the future this will be invaluable in planning the development of primary education in the country. The provinces do not report any difficulties in preparing statistical data at the schools, but getting the data to the provincial centre for collation is a major problem. Provinces are building up a good supply of baseline data against which they can compare future data.

Grade I enrolment

Table 1 shows that the average primary enrolment in the national education system is 84.4 per cent. When the 6 per cent enrolment in schools outside the system from Table 6 is added, the total enrolment is 90.4 per cent, as shown in Table 1B. This is an exaggerated figure, as explained earlier, since there are many over-aged children enrolled in grade I and there is no way to gain an accurate picture of the percentage of seven year olds enrolled. Data collection will need to be refined in the future.

Provincial enrolment statistics vary widely. There is no room for complacency in the Southern Highlands, Madang and other provinces. Over-age enrolment is more likely in the Highlands, where education has only recently become available , so the low percentage of enrolment there would drop even more if over-age children were not counted in the statistics.

Statistics show that some districts are contributing very poorly to the educational development of the provinces. The sample table

Province	*Provincial Average*	*District within Province*	*District Average*
Western Highlands	89.4	Jimi	56.9
Enga	81.9	Kandep	46.1
Simbu	100.0	Gumine	69.0
Milne Bay	93.6	Rabaraba	50.1
		Losuia	59.6
Eastern Highlands	88.5	Okapa	56.0
Morobe	78.8	Menyamya	42.3
Southern Highlands	64.9	Tari	44.1
		Koroba	48.7
Western	88.0	Lake Murray	52.9

below shows the difference between average provincial enrolments and enrolments in selected districts of seven provinces.

The provinces need to take note of such figures and plan new schools for their most disadvantaged districts. Sometimes provinces have planned to open schools in these districts but have found few teachers willing to accept the postings. Also, some of these districts are so sparsely populated that they can support only a one-or two-teacher school, but multiple-class teaching is not favoured by many teachers. Provinces are more inclined to open schools where they have been invited to do so and such requests rarely come from the remote, sparsely populated areas. Families in such areas who are interested in education send their children to live with relatives where there are already schools, and the enrolment of those schools is consequently inflated.

The highest enrolment figures for the provinces are in the districts where the provincial capitals are located as shown on the next page. This is largely because the first schools were established in the provincial capitals, and teachers are happiest to serve there, because many children migrate there to attend school, and because parents there are more inclined to see the value of education.

Province	*Provincial Average*	*District with Provincial Capital*	*District Average*
Western	88.0	Daru	111.7
Southern Highlands	64.9	Mendi	87.0
Western Highlands	89.4	Mt. Hagen	111.1

There are no statistics available for urban versus rural enrolment. Even though all towns in Papua New Guinea are quite small, Provincial Planning Committees, Education Boards, and governments should seriously consider the statistics in the above tables in order to plan for a broader distribution of schools.

Table 1A shows the exceedingly low enrolment of girls in many districts, and the small table below focuses on the problem in seven provinces.

Province	*Provincial average*	*District*	*Age-group population of girls in that district*
Madang	65.9	Ramu	34.0
		Saidon	36.1
Western Highlands	89.4	Jimi	45.8
Enga	81.9	Wabag	34.6
		Kandep	34.7
Milne Bay	95.0	Rabaraba	44.3
Eastern Highlands	88.5	Okapa	45.5
Gulf	80.2	Kaintiba	15.9
Morobe	78.8	Manyamya	19.9

The various Boards are well aware of this problem and are grappling with it. They need to find out why parents are not sending their girls to school. Boys in Papua New Guinea slightly outnumber girls, but this should not be reflected in the *percentages* of girls and boys enrolled. If 65 per cent of the boys from the Menyamya district are enrolled in grade 1, for example, then we could also expect 65 per cent of the girls to attend, rather than only 19.9 per cent. Over 90 per cent of the seven-year-olds in the whole nation could be in school at no extra cost if the enrolment of girls matched that of

boys. The classroom are there, the teachers are there, and the children could also be there but are not.

Every possible method should be used to persuade parents of the value of primary education. Teachers should be heavily involved in this aspect of community relations. Very often teachers are content to have fewer pupils in their classes. Often they cannot be bothered to encourage parents to send their children. Enthusiastic teachers can make parents and children enthusiastic in getting other children to attend.

Apart from the low enrolment of girls in some districts and low overall enrolment in others, in general the 1983 grade I enrolment was reasonably satisfactory, but there is still room for improvement.

Enrolment in grades I through VI

If the enrolment figures from Tables 1B and 2B are compared, as follows, it can be seen that the overall enrolment for grades I-VI was not as satisfactory as that for grade I.

Central Province and five highland provinces, Southern Highlands, Enga, Western Highlands, Simbu and Eastern Highlands, all show up badly here. The North Solomons figure of 120.5 per cent is inflated by the large number of nine-year-olds in grade I. In the highlands there are some explanations for the low enrolment statistics. The numbers in grade I five and six years ago were much smaller than now, so that fewer pupils moved up through the grades. The national government policy of equity has greatly improved the grade I intake but the improvement still take some years to work through the system. Also, the highland provinces have been introduced to education much more recently and are still learning to see the value of a full six-year primary education.

Tables 2, 2A, 2B and 2C show the same trends as already noted for grade I enrolment. There are very poor enrolments in some advantaged districts. The low enrolment of girls needs much attention. Provinces must start to examine such data very carefully and seek solutions to the problems. The value of a primary education for all citizens of a country is universally recognized and must be taken seriously.

Province	*Grade I age-group population enrolled*	*Grades I-VI age-group population enrolled*	*Difference*
Western	88.7	70.4	18.3
Gulf	82.8	69.6	13.2
Nat'l. Capital District	88.1	81.9	6.2
Central	110.3	81.1	29.2
Milne Bay	93.9	70.0	23.9
Oro	83.7	66.6	17.1
Southern Highlands	65.2	50.2	15.0
Enga	83.5	53.7	29.8
Western Highlands	91.5	54.8	36.7
Simbu	101.5	58.8	42.7
Eastern Highlands	90.3	55.9	34.4
Morobe	109.1	71.4	37.7
Madang	67.6	57.3	10.3
East Sepik	88.9	67.7	21.2
West Sepik	73.1	69.7	3.4
Manus	116.7	110.2	6.5
New Ireland	91.8	83.4	8.4
East New Britain	100.0	81.4	18.6
West New Britain	91.2	81.3	9.9
North Solomons	120.5	82.4	38.1
P.N.G.	91.9	70.9	21.0

Reducing primary school fees is a possible incentive to encourage families to enrol more children, but not a very strong one since the fees are nominal. Fees in the provinces range from K2.00 to K20.00. Two provinces charge no fees at all, others provide half the school fees, and others charge a special family rate when two or more children from the same family attend school. Sometimes provinces reduce or even waive fees for children in economically disadvantaged areas. For families whose children attend community schools, fees are not really a problem because all members of the extended family contribute to the cost of the children's schooling.

One province is considering lowering the fees for girls in order to induce parents to send more daughters to school. Another province is addressing this problem by trying to hire two women teachers per school. Although the presence of women teachers would reassure the parents of many girl pupils, this would be difficult to implement nationally since some districts have very few women teachers and some schools are small, remote and in very sparsely populated areas. The National Capital District, on the other hand, has a ratio of 1½ female teachers for every male teacher because the women are the wives of men working in the Capital.

Morobe Province supplies free school materials to encourage children to attend. All textbooks in Papua New Guinea are supplied free to school children, but supply is often a problem. Morobe Province has proposed the following procedures to ensure an adequate supply of school materials for all pupils. Each community school must submit an estimate of materials needed for the following year by October 31st. The Materials Officer will then check this list against the number of estimated students by grade which is supplied by the Senior Professional Assistant, place the order for the province, check any delays in delivery from Port Moresby. and then facilitate distribution to each school within a fortnight of the beginning of the term. The Materials Officer will supply materials during the school year according to a predetermined schedule.

Another interesting incentive has been introduced by Bougainville Copper Limited. This company re-imburses all school fees paid by its employees. This has boosted the morale of the employees so that the children of almost every employee now attend school.

Retention rates

Tables 3 and 3A must be examined next to Tables 2 through 2C. Only 67.5 per cent of the students who were in grade I in 1978 were still in primary school in 1983. If all the children who started school in 1978 were still in school in 1983, another 3.5 per cent would have to be added to the 1983 grade I-VI enrolment.

Opening new schools and getting more seven-year-old children into grade I is not Papua New Guinea's main problem. Access is less of a problem than retention. Overall, 32.5 per cent of the school enrolment is lost over the years. The five highland provinces lose

almost half the children who enrol. Provinces need to mount a major compaign to educate everyone about the value of a full primary education.

The study by Bray and Boze of the drop-out problem showed that teachers often regarded dropping out as a solution rather than a problem. A general study conducted by the Department of Education in 1980 showed that children who dropped out were happy to do so because they were bored in school. The teaching was dull and uninteresting. These two studies show that a major reason for children dropping out of school is poor teaching and a lack of appreciation by teachers of the value of primary education. Another reason is that they often have to walk long distances to school over difficult terrain. Another was parental apathy. Sometimes children have to go without breakfast and lunch because they go to school. Some parents are unhappy about paying school fees when their children are unlikely to go to high school and to get a job later to help them so they withdraw their children from school. This is the biggest problem facing Papua New Guinea in primary education and it must be faced honestly.

The Southern Highlands Province is setting up District Education Offices to monitor education in each district. Among the main tasks of the officers in charge should be parent education and teacher training. Some provinces are discussing appointing a member of the Board of Management to trace children who drop out and try and get them back. Others talk of introducing legislation to make all children who enrol in grade I continue to the end of grade VI, or radio campaigns extolling the virtues of a full primary education. Little has been done, however. Some posters encouraging school attendance have been produced, but nobody knows if they are at all effective.

Boards of Management could play an important role in retention of pupils. West New Britain is planning courses to help Board members understand their duties and this role could be included. The provinces must be prepared to spend money on this. Even if they opened no new schools at all for a year or two and limited access while concentrating retention, it would be well worthwhile.

Surprisingly, Table 3A shows that more girls are retained in school than boys, though only marginally. Again, retention rates for girls are lower in a few provinces and this brings the average down.

Morobe Province has planned a number of strategies to reduce drop-outs in community schools. The problem will be discussed as part of the provincial parent education programme to increase participation in community schools. This programme will use radio and news sheets written in Pidgin. Another measure to combat drop-outs will be the enforcement of good record-keeping on attendance. Teachers will be alerted to potential drop-outs from their patterns of attendance, attempt to find out from parents or other students why some students are staying away and try to do something about them. The headmasters of all community schools will also take a more active role in monitoring drop-outs and devising strategies to reduce the problem. In attendance returns they will report on the incidence of drop-outs by grade and what is being done about it. Schools that have a particularly serious drop-out record according to attendance returns will then be investigated by the Senior Professional Assistant. This Assistant will forward a circular to all teachers and headmasters about the drop-out problem and their role in fighting it.

The assistance of school inspectors will also be sought in reducing the drop-out problem. In their advisory visits, they will discuss the problem and suggest solutions. Their overall assessments of teachers and headmasters will include attendance records and attempts to keep children in school.

Boards of Management will be reminded by letter in Pidgin of their obligations to encourage parents in the area to send their children to school through grade VI.

Attendance certificates will be introduced for all community school students in the province. A certificate with "gold" letters will be given to all students with 95 per cent attendance, and one with "silver" letters will be given to students with attendance between 90 per cent and 95 per cent. Each community school will present an attendance shield to the grade with the highest enrolment each month or fortnight. The cost of attendance certificates will be K500 per year or K2500 over the planned period, while the cost of class shields will be met by the school.

Transfer rates from primary to high school

Approximately one-third of all grade VI pupils in 1982 were able to enter grade VII in 1983 in provincial high schools. This has

been fairly constant for some years and it is not likely to change. National Government policy is to expand high school places only minimally. Provincial governments would like to build more high schools but lack funds to do so. Even the educationally disadvantaged provinces have to provide half the cost of building high schools, with the other half coming from the National Government. If high school places increase only marginally and more and more children enter grade VI, the transfer rate will slowly decrease.

Selection criteria are also causing some concern. At one extreme, selection is made purely on academic merit. This usually means that the town area schools get a very high percentage of pupils in grade VII and more remote schools get none at all. At the other extreme is the full quota system in which every grade VI class promotes the same percentage of pupils to grade VII. This often results in children going to high school when they cannot cope with the studies at that level. Most provinces are opting for criteria combining both merit and quotas.

There is a lower transfer rate for girls than for boys, though the gap is closing quickly. However, because of the smaller number of girls in grade VI, the ratio of boys to girls transferring into high schools is 2:1. It will be many many years before it reaches 1:1.

Teaching staff

The ratio of male to female teachers is 2.5:1. This will probably not change for a long time. There are many empty beds in ladies' dormitories in teachers colleges. Many more girls from grade X could be accepted into these colleges if they could be encouraged to apply. The annual increase in teaching staff is about 250. A lower staff attrition rate would increase this annual growth rate, but it is not likely that this will happen.

Teacher-pupil ratios

The national teacher-pupil ratio has been constant for years. The only way to increase it is to increase the retention rate in schools. The national target is 1:35 but it will be some time before that can be achieved.

Provincial expenditures on education

In 1983 reasonably reliable figures for provincial budgets were obtained for the first time. Table 8B shows that the provinces spend 21.9 per cent of their total budgets on primary education. With an odd exception this does not vary much among the provinces. Overall, they spend 32.3 per cent of their budgets on education, so that, two-thirds of the education budget is spent on primary school education. Teacher salaries are relatively high and account for 90 per cent of the budget for primary school education. This leaves little money for other aspects of primary education.

The unit cost for education in Papua New Guinea is extremely high. The provincial component of the cost is an average of K144.60 (K1 = US$1.16), equivalent to US$168.00. The national component amounts to approximately K15 per pupil. This brings the total unit cost for education to K160, or US$ 185.00. This is very high indeed. The only way to lower this unit cost would be to lower teacher salaries, but this would be almost impossible unless all salaries in the country were lowered simultaneously.

Special schools

Table 9 lists the number of one-or two-teacher schools in Papua New Guinea. Almost all the one-teacher schools are new schools that started with one class of grade I pupils. A good number of the two-teacher schools have multiple classes and these added to the number of other multiple classes bring the total number to about 450. As teachers transfer in and out of these schools, more and more of them need training in the special techniques of multiple-class teaching. Since the National Government is responsible for training, this is an area it should examine to ensure a rise in primary education standards.

Table 1. Grade I enrolment, 1983

Province	*Gr. I Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	2,185	2,484	88.0	96.0
Gulf	1,595	1,989	80.2	85.0
Nat'l. Capital	2,856	3,599	79.4	85.0
Central	3,779	3,595	105.1	96.0
Milne Bay	3,483	3,719	93.7	95.0
Oro	2,091	2,504	83.5	90.0
South. Highlands	5,140	7,917	64.9	70.0
Enga	3,871	4,727	81.9	85.0
West. Highlands	6,647	7,436	89.4	90.0
Simbu	4,268	4,234	101.0	100.0
East. Highlands	7,003	7,915	88.5	90.0
Morobe	7,511	9,526	78.8	82.0
Madang	4,678	7,100	65.9	70.0
East Sepik	5,911	6,735	87.8	95.0
West Sepik	2,443	3,340	73.1	80.0
Manus	884	814	108.6	100.0
New Ireland	1,779	2,013	88.4	95.0
East New Britain	3,729	3,840	93.5	100.0
West New Britain	2,611	2,895	90.2	95.0
North Solomons	3,882	4,116	94.3	96.0
TOTAL	76,346	90,498	84.4	90.0

Table 1A. Grade I enrolment by sex, 1983

Province	BOYS				GIRLS			
	Gr. I Enrolment	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*	*Gr. I Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	1,193	1,313	90.7	100.0	992	1,171	84.7	90.0
Gulf	906	1,011	89.6	90.0	689	978	70.4	80.0
Nat'l.Capital	1,489	1,918	77.6	85.0	1,367	1,681	81.3	85.0
Central	2,040	1,871	109.0	100.0	1,739	1,724	100.0	92.0
Milne Bay	1,890	1,902	99.4	100.0	1,593	1,817	87.7	95.0
Oro	1,161	1,279	91.2	95.0	930	1,225	75.9	85.0
South.Highlands	2,960	4,123	71.8	78.0	2,180	3,794	57.5	65.0
Enga	2,324	2,427	95.8	96.0	1,547	2,300	67.3	80.0
West.Highlands	3,689	3,876	95.0	98.0	2,958	3,560	83.1	85.0
Simbu	2,443	2,235	109.0	100.0	1,825	1,999	91.0	95.0
East.Highlands	3,812	4,122	92.5	92.0	3,191	3,793	84.1	88.0
Morobe	4,370	4,918	88.9	90.0	3,141	4,608	68.2	75.0
Madang	2,776	3,735	74.3	80.0	1,902	3,365	56.5	65.0
East Sepik	3,403	3,650	93.2	95.0	2,508	3,085	81.3	85.0
West Sepik	1,506	1,716	87.8	95.0	937	1,624	58.1	65.0
Manus	487	432	112.7	100.0	397	382	103.9	100.0
New Ireland	986	1,117	88.3	95.0	793	896	878.5	95.0
East New Britain	1,956	1,991	98.2	100.0	1,773	1,849	95.9	100.0
West New Britain	1,403	1,544	90.9	95.0	1,208	1,351	89.4	95.0
North Solomons	1,952	2,135	91.4	95.0	1,930	1,981	97.9	100.0
TOTAL	42,746	47,315	90.3	95.0	33,600	43,183	77.8	82.0

Table 1B. Total enrolment of 7-year-olds, 1983

Province	*7-year-olds enrolled*	*7-year-old population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	2,203	2,484	88.7	96.0
Gulf	1,646	1,989	82.8	85.0
Nat'l. Capital	3,171	3,599	88.1	95.0
Central	3,966	3,595	110.3	100.0
Milne Bay	3,491	3,719	93.9	95.0
Oro	2,096	2,504	83.7	90.0
South. Highlands	5,164	7,917	65.2	70.0
Enga	3,947	4,727	83.5	85.0
West. Highlands	6,785	7,436	91.2	95.0
Simbu	4,282	4,234	101.1	100.0
East. Highlands	7,147	7,915	90.3	92.0
Morobe	10,394	9,526	109.1	100.0
Madang	4,801	7,100	67.6	75.0
East Sepik	5,990	6,735	88.9	95.0
West Sepik	2,443	3,340	73.1	80.0
Manus	950	814	116.7	100.0
New Ireland	1,848	2,013	91.8	95.0
East New Britain	3,844	3,840	100.0	100.0
West New Britain	2,640	2,895	91.2	96.0
North Solomons	4,963	4,116	120.5	100.0
TOTAL	81,771	90,498	90.4	95.0

Table 1C. Total enrolment of 7-year-olds by sex, 1983

Province	BOYS				GIRLS			
	7-year-olds enrolled	*7-year-old population*	*Percentage of age-group population enrolled*	*1987 target percentage*	*7-year-olds enrolled*	*7-year-old population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	1,202	1,313	92.2	100.0	1,001	1,171	86.2	90.0
Gulf	933	1,011	92.3	95.0	713	978	72.9	80.0
Nat'l Capital	1,668	1,918	87.0	95.0	1,503	1,681	89.4	95.0
Central	2,137	1,871	114.2	100.0	1,829	1,724	106.1	100.0
Milne Bay	1,895	1,902	99.6	100.0	1,596	1,817	87.8	95.0
Oro	1,164	1,279	91.4	95.0	932	1,225	76.1	85.0
South.Highlands	2,976	4,123	72.2	78.0	2,188	3,794	57.7	65.0
Enga	2,360	2,427	97.2	100.0	1,587	2,300	69.0	80.0
West.Highlands	3,771	3,876	97.2	100.0	3,014	3,560	84.7	90.0
Simbu	2,456	2,235	109.7	100.0	1,826	1,999	91.4	95.0
East.Highlands	3,901	4,122	94.6	95.0	3,246	3,793	85.6	89.0
Morobe	6,237	4,918	126.8	100.0	4,157	4,608	90.2	95.0
Madang	2,837	3,735	75.9	80.0	1,964	3,365	58.4	65.0
East Sepik	3,447	3,650	94.4	95.0	2,543	3,085	82.4	85.0
West Sepik	1,506	1,716	87.8	95.0	937	1,624	58.1	65.0
Manus	539	432	124.8	100.0	411	382	107.6	100.0
New Ireland	1,017	1,117	91.0	95.0	831	896	92.7	95.0
East New Britain	2,019	1,991	101.4	100.0	1,825	1,849	98.7	100.0
West New Britain	1,423	1,544	92.2	96.0	1,217	1,351	90.1	96.0
North Solomons	2,531	2,135	118.5	100.0	2,432	1,981	122.8	100.0
TOTAL	46,019	47,315	97.3	100.0	35,752	43,183	82.8	90.0

Table 2. Enrolment in grades I-VI, 1983

Province	*Gr. I-VI enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	9,981	14,392	69.3	84.0
Gulf	8,019	11 903	67.4	75.0
Nat'l. Capital	14,411	18,639	77.3	85.0
Central	16,223	21,176	76.6	82.0
Milne Bay	16,377	23,470	69.8	75.0
Oro	9,679	14,743	65.7	72.0
South. Highlands	21,756	43,639	49.9	60.0
Enga	13,790	26,150	52.7	60.0
West. Highlands	23,660	43,783	54.0	60.0
Simbu	15,378	26,445	58.2	67.0
East. Highlands	25,679	47,446	54.1	60.0
Morobe	32,278	54,882	58.8	65.0
Madang	21,185	37,956	55.8	60.0
East Sepik	25,956	39,005	66.5	70.0
West Sepik	11,666	16,737	69.7	75.0
Manus	4,860	4,750	102.3	100.0
New Ireland	8,968	11,338	79.1	85.0
East New Britain	18,109	21,264	85.2	90.0
West New Britain	13,030	16,157	80.6	90.0
North Solomons	16,009	22,213	72.0	72.0
TOTAL	327,014	516,088	63.4	70.0

Table 2A. Enrolment in grades I-VI by sex, 1983

Province	BOYS				GIRLS			
	Gr. I-VI Enrolment	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*	*Gr. I- VI Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	5,604	7,530	74.4	84.0	4,377	6,862	63.9	70.0
Gulf	4,702	6,183	76.0	80.0	3,317	5,720	58.0	70.0
Nat'l.Capital	7,735	9,866	78.4	85.0	6,676	8,773	76.1	85.0
Central	8,839	11,022	80.2	84.0	7,384	10,154	72.7	80.0
Milne Bay	8,865	12,224	72.5	80.0	7,512	11,246	66.8	75.0
Oro	5,420	7,687	70.5	80.0	4,259	7,056	60.4	70.0
South.Highlands	12,328	22,728	54.2	60.0	9,428	20,911	45.1	60.0
Enga	8,525	13,364	63.8	70.0	5,265	12,786	41.2	50.0
West.Highlands	13,206	22,525	58.6	65.0	10,454	21,258	49.2	55.0
Simbu	9,099	13,860	65.6	70.0	6,279	12,595	49.9	60.0
East.Highlands	14,556	24,974	58.3	65.0	11,123	22,472	49.5	55.0
Morobe	18,962	28,785	65.9	70.0	13,316	26,097	51.0	60.0
Madang	12,775	19,952	64.0	70.0	8,410	18,004	46.7	55.0
East Sepik	14,815	19,503	76.0	80.0	11,141	19,502	57.1	63.0
West Sepik	7,381	8,694	84.9	90.0	4,285	8,043	53.3	60.0
Manus	2,596	2,469	105.1	100.0	2,264	2,281	99.3	100.0
New Ireland	4,846	5,872	82.5	87.0	4,122	5,466	75.4	82.0
East New Britain	9,640	10,701	90.1	90.0	8,469	10,563	80.2	84.0
West New Britain	7,479	8,704	85.9	90.0	5,551	7,453	74.5	80.0
North Solomons	8,390	11,440	73.3	72.0	7,619	10,773	70.7	72.0
TOTAL	185,763	268,083	69.3	75.0	141,251	248,005	57.0	62.0

Table 2B. Total primary age-group enrolment in various stream, 1983

Province	*Age-group enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	10,135	14,392	70.4	84.0
Gulf	8,281	11,903	69.6	75.0
Nat'L Capital	15,275	18,639	81.9	85.0
Central	17,177	21,176	81.1	82.0
Milne Bay	16,438	23,470	70.0	75.0
Oro	9,818	14,743	66.6	72.0
South. Highlands	21,889	43,639	50.2	60.0
Enga	14,037	26,150	53.7	60.0
West. Highlands	23,978	43,783	54.8	60.0
Simbu	15,537	26,445	58.8	67.0
East. Highlands	26,508	47,446	55.9	62.0
Morobe	39,191	54,882	71.4	75.0
Madang	21,735	37,956	57.3	65.0
East Sepik	26,397	39,005	67.7	70.0
West Sepik	11,666	16,737	69.7	75.0
Manus	5,233	4,750	110.2	100.0
New Ireland	9,456	11,338	83.4	85.0
East New Britain	18,556	21,264	81.4	85.0
West New Britain	13,140	16,157	81.3	85.0
North Solomons	18,307	22,213	82.4	85.0
TOTAL	342,754	516,088	66.4	70.0

Table 2C. Total primary age-group enrolment by sex, 1983

Province	BOYS				GIRLS			
	Gr. I-VI Enrolment	*Age-group population*	*Percentages of age-group population enrolled*	*1987 target percentage*	*Gr. I-VI Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*1987 target percentage*
Western	5,689	7,530	75.6	84.0	4,446	6,862	64.9	70.0
Gulf	4,874	6,183	78.8	80.0	3,407	5,720	59.6	70.0
Nat'l.Capital	8,231	9,866	83.4	85.0	7,044	8,773	80.3	85.0
Central	9,381	11,022	85.1	90.0	7,796	10,154	76.8	80.0
Milne Bay	8,889	12,224	72.8	80.0	7,549	11,246	67.1	75.0
Oro	5,505	7,687	71.6	80.0	4,313	7,056	61.1	70.0
South.Highlands	12,400	22,728	54.6	60.0	9,489	20,911	45.4	60.0
Enga	8,659	13,364	64.8	70.0	5,378	12,786	42.1	50.0
West.Highlands	13,385	22,525	59.4	65.0	10,593	21,258	49.8	55.0
Simbu	9,209	13,860	66.4	70.0	6,328	12,585	50.2	60.0
East.Highlands	15,081	24,974	60.4	65.0	11,427	22,472	50.8	55.0
Morobe	23,596	28,785	84.9	90.0	15,595	26,097	59.8	65.0
Madang	13,142	19,952	65.9	70.0	8,593	18,004	47.7	55.0
East Sepik	15,063	19,503	77.2	80.0	11,334	19,502	58.1	63.0
West Sepik	7,381	8,694	84.9	90.0	4,285	8,043	53.3	60.0
Manus	2,814	2,469	114.0	100.0	2,419	2,281	106.0	100.0
New Ireland	5,096	5,872	86.8	90.0	4,360	5,466	79.8	83.0
East New Britain	9,890	10,701	92.4	85.0	8,666	10,563	82.0	85.0
West New Britain	7,539	8,704	86.6	90.0	5,601	7,453	75.2	80.0
North Solomons	9,590	11,440	83.8	85.0	8,717	10,773	80.9	85.0
TOTAL	195,414	268,083	72.9	75.0	147,340	248,005	59.4	65.0

Table 3. Retention rates, 1983

Province	*1978 Gr. I Enrolment*	*1983 Gr. VI Enrolment*	*Percentage of this age-group retained*	*1978 target percentage*
Western	1,882	1,301	69.1	75.0
Gulf	1,480	1,067	72.1	75.0
Nat'L Capital	2,131	1,937	90.9	95.0
Central	2,443	1,838	75.2	80.0
Milne Bay	2,878	2,078	72.2	78.0
Oro	1,781	1,262	70.9	75.0
South Highlands	4,139	2,239	54.1	65.0
Enga	2,736	1,423	52.0	60.0
West Highlands	4,089	2,296	56.2	60.0
Simbu	3,131	1,630	52.1	65.0
East. Highlands	3,833	2,246	58.6	65.0
Morobe	4,061	3,059	75.3	80.0
Madang	2,926	2,196	75.1	78.0
East Sepik	4,264	3,142	73.7	78.0
West Sepik	1,943	1,306	67.2	70.0
Manus	826	824	99.7	95.0
New Ireland	1,490	1,049	70.4	75.0
East New Britain	4,112	2,481	60.3	70.0
West New Britain	1,894	1,499	79.1	85.0
North Solomons	2,767	2,096	75.7	80.0
TOTAL	54,806	36,969	67.5	75.0

Table 3A. Retention rates by sex, 1983

Province	BOYS				GIRLS			
	1978 Gr. I Enrolment	*1983 Gr. VI Enrolment*	*Percentage of this age-group retained*	*1987 target percentage*	*1978 Gr. I Enrolment*	*1983 Gr. VI Enrolment*	*Percentage of this age-group retained*	*1987 target percentage*
Western	1,082	704	65.1	70.0	800	597	74.6	80.0
Gulf	889	652	73.3	75.0	591	415	70.2	75.0
Nat'l.Capital	1,166	1,076	92.3	95.0	965	861	89.2	95.0
Central	1,356	1,092	80.5	82.0	1,087	746	68.6	78.0
Milne Bay	1,594	1,137	71.3	75.0	1,284	941	73.3	75.0
Oro	1,041	742	71.3	75.0	740	520	70.3	75.0
South.Highlands	2,678	1,305	48.7	60.0	1,461	934	63.9	70.0
Enga	1,885	898	47.6	60.0	851	525	61.7	65.0
West.Highlands	2,427	1,328	54.7	60.0	1,662	968	58.2	60.0
Simbu	1,903	1,005	52.8	65.0	1,228	625	50.9	65.0
East.Highlands	2,216	1,302	58.8	65.0	1,617	944	58.4	65.0
Morobe	2,467	1,817	73.7	78.0	1,594	1,242	77.9	83.0
Madang	1,839	1,358	73.8	77.0	1,087	838	76.0	79.0
East Sepik	2,497	1,827	73.2	80.0	1,767	1,315	74.4	80.0
West Sepik	1,245	876	70.4	75.0	698	430	61.6	65.0
Manus	415	426	102.7	100.0	411	398	96.8	95.0
New Ireland	803	570	71.0	75.0	687	479	69.7	75.0
East New Britain	2,075	1,337	64.4	70.0	2,037	1,144	56.2	70.0
West New Britain	995	857	86.1	90.0	899	642	71.4	80.0
North Solomons	1,508	1,125	74.6	80.0	1,259	971	77.1	80.0
TOTAL	32,081	21,434	66.8	70.0	22,752	15,535	68.4	75.0

Table 4. Transfer rates from primary to high school, 1982-1983

Province	*1982 Gr. VI Enrolment*	*1983 Gr. VII Enrolment*	*Percentage of this age-group promoted*	*1987 target percentage*
Western	1,325	400	30.2	40.0
Gulf	908	327	36.0	35.0
Nat'l. Capital	2,006	763	38.0	40.0
Central	1,929	862	44.7	45.0
Milne Bay	2,509	590	22.6	25.0
Oro	1,255	329	26.2	30.0
South. Highlands	2,174	837	38.5	40.0
Enga	1,254	458	36.5	40.0
West. Highlands	2,155	1,011	46.9	40.0
Simbu	1,850	771	41.7	40.0
East. Highlands	3,146	858	27.3	30.0
Morobe	4,017	1,025	25.5	27.0
Madang	2,536	735	29.0	30.0
East Sepik	2,928	920	31.4	35.0
West Sepik	1,674	590	33.4	35.0
Manus	554	320	57.7	60.0
New Ireland	1,224	473	38.6	40.0
East New Britain	2,728	1,097	40.2	50.0
West New Britain	1,433	501	35.0	40.0
North Solomons	1,826	629	34.4	35.0
TOTAL	39,431	13,496	34.2	35.0

Table 4A. Transfer rates from primary to high school by sex, 1982-1983

Province	BOYS				GIRLS			
	1982 Gr. VI Enrolment	*1983 Gr. VII Enrolment*	*Percentage of this age-group promoted*	*1987 target percentage*	*1982 Gr. VI Enrolment*	*1983 Gr. VII Enrolment*	*Percentage of this age-group promoted*	*1987 target percentage*
Western	773	279	36.1	40.0	552	121	21.9	40.0
Gulf	562	212	37.7	35.0	346	115	33.2	35.0
Nat'l.Capital	1,061	418	39.4	40.0	945	345	36.5	40.0
Central	1,102	513	46.5	45.0	827	349	42.2	45.0
Milne Bay	1,403	362	25.8	25.0	1,106	228	20.4	25.0
Oro	722	261	36.1	30.0	533	68	12.8	20.0
South.Highlands	1,370	530	38.7	40.0	804	307	38.2	40.0
Enga	864	324	37.5	40.0	390	134	34.4	40.0
West.Highlands	1,229	696	56.6	40.0	926	315	34.0	40.0
Simbu	1,187	579	48.8	45.0	663	192	29.0	35.0
East.Highlands	1,939	604	31.2	35.0	1,207	254	21.0	25.0
Morobe	2,393	668	27.9	30.0	1,624	357	22.0	25.0
Madang	1,554	502	32.3	38.0	982	233	23.7	30.0
East Sepik	1,837	589	32.0	35.0	1,091	331	30.3	35.0
West Sepik	1,122	418	37.3	35.0	552	172	31.7	35.0
Manus	311	180	57.9	60.0	243	140	57.6	60.0
New Ireland	698	252	36.1	40.0	526	221	42.0	40.0
East New Britain	1,426	577	40.5	50.0	1,302	520	39.9	50.0
West New Britain	836	321	38.4	40.0	597	180	30.2	40.0
North Solomons	1,049	383	36.5	35.0	777	246	31.7	35.0
TOTAL	23,438	8,668	37.0	35.0	15,993	4,828	30.2	35.0

Table 5. Staff numbers and ratios

Province	1983 Actual					1987 Target				
	Average teacher-pupil ratio 1:x	Average teacher-inspector ratio 1:x	No. of teachers			No. of inspectors	Average teacher-pupil ratio 1:x	Average teacher-inspector ratio 1:x	No. of teachers	No. of inspectors
			Male	Female	Total					
Western	29.1	69	277	66	343	5	35.0	73	365	5
Gulf	30.8	65	214	46	260	4	32.0	70	280	4
Nat'l. Capital	36.6	80	155	239	394	5	35.0	75	450	6
Central	31.6	86	394	120	514	6	32.0	80	560	7
Milne Bay	31.3	66	360	166	526	8	32.0	70	560	8
Oro	33.0	73	209	84	293	4	35.0	84	335	4
South. Highlands	32.3	85	568	105	673	8	35.0	80	790	10
Enga	30.3	91	368	87	455	5	33.0	83	495	6
West. Highlands	33.0	102	552	166	718	7	35.0	90	800	9
Simbu	31.2	99	401	92	493	5	30.0	83	579	7
East Highlands	34.3	94	595	154	749	8	35.0	85	930	11
Morobe	33.9	87	613	339	952	11	35.0	85	1,110	13
Madang	32.0	94	535	129	664	7	34.0	78	777	10
East Sepik	33.0	94	569	181	750	8	35.0	82	898	11
West Sepik	28.5	68	336	74	410	6	30.0	76	454	6
Manus	32.0	76	93	59	152	2	33.5	72	144	2
New Ireland	27.2	83	225	105	330	4	27.5	70	345	5
East New Britain	28.1	93	389	254	643	7	33.0	88	705	8
West New Britain	28.9	90	271	179	450	5	30.0	83	495	6
North Solomons	29.7	90	286	252	538	6	30.0	76	610	8
TOTAL	31.7	84	7,410	2,897	10,307	121	33.0	79	11,682	146

Table 6. Grade I enrolment in non-community schools, 1983

Province	*Gr. I Enrolment*	*Age-group population*	*Percentage of age-group enrolled*
Western	33	2,484	1.3
Gulf	51	1,989	2.6
Nat'l. Capital	315	3,599	8.8
Central	187	3,595	5.2
Milne Bay	8	3,719	0.2
Oro	5	2,504	0.2
South. Highlands	24	7,917	0.3
Enga	76	4,727	1.6
West. Highlands	138	7,436	1.9
Simbu	14	4,234	0.3
East. Highlands	144	7,915	1.8
Morobe	2,883	9,526	30.3
Madang	123	7,100	1.7
East Sepik	79	6,735	1.2
West Sepik	–	–	–
Manus	66	814	8.1
New Ireland	69	2,013	3.4
East New Britain	115	3,840	3.0
West New Britain	29	2,895	1.0
North Solomons	1,081	4,116	26.3
TOTAL	5,440	87,158	6.2

Table 6A. Grade I enrolment in non-community schools by sex, 1983

	BOYS			*GIRLS*		
Province	*Gr. I Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*	*Gr. I Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*
Western	18	1,313	1.4	15	1,171	1.3
Gulf	27	1,011	2.7	24	978	2.5
Nat'l. Capital	179	1,918	9.3	136	1,681	8.1
Central	97	1,871	5.2	90	1,724	5.2
Milne Bay	5	1,902	0.3	3	1,817	0.2
Oro	3	1,273	0.2	2	1,225	0.2
South. Highlands	16	4,123	0.4	8	3,794	0.2
Enga	36	2,427	1.5	40	2,300	1.7
West. Highlands	82	3,876	2.1	56	3,560	1.6
Simbu	8	2,235	0.4	6	1,999	0.3
East. Highlands	89	4,122	2.2	55	3,793	1.5
Morobe	1,867	4,918	38.0	1,016	4,608	22.0
Madang	61	7,100	0.9	62	3,365	1.8
East Sepik	44	3,650	1.2	35	3,085	1.1
West Sepik	–	–	–	–	–	–
Manus	52	432	12.0	14	382	3.7
New Ireland	31	1,117	2.8	38	896	4.2
East New Britain	63	1,991	3.2	52	1,849	2.8
West New Britain	20	1,544	1.3	9	1,351	0.7
North Solomons	579	2,135	27.1	502	1,981	25.3
TOTAL	3,277	48,958	6.7	2,163	41,559	5.2

Table 7. Grade I-VI enrolment in non-community schools, 1983

Province	*Gr. I-VI Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*
Western	164	14,392	1.1
Gulf	262	11,903	2.2
Nat'l. Capital	834	18,639	4.5
Central	954	21,175	4.5
Milne Bay	71	23,470	0.3
Oro	139	14,743	0.9
South. Highlands	133	43,639	0.3
Enga	247	26,150	0.9
West. Highlands	351	43,783	0.8
Simbu	159	26,445	0.6
East. Highlands	829	47,446	1.8
Morobe	6,913	54,882	12.6
Madang	550	37,956	1.5
East Sepik	441	39,005	1.1
West Sepik	–	–	–
Manus	373	4,750	7.9
New Ireland	488	11,338	4.3
East New Britain	447	22,797	2.0
West New Britain	110	16,157	0.7
North Solomons	2,298	22,213	10.3
TOTAL	15,763	500,883	3.1

Table 7A. Grade I-VI enrolment in non-community schools by sex, 1983

Province	BOYS			GIRLS		
	Gr. I-VI Enrolment	Age-group population	Percentage of age-group population enrolled	Gr. I-VI Enrolment	Age-group population	Percentage of age-group population enrolled
Western	85	7,530	1.1	79	6,862	1.1
Gulf	172	6,183	2.8	90	5,720	1.6
Nat'l. Capital	481	9,866	4.9	353	8,773	4.0
Central	542	10,631	5.1	412	10,544	4.0
Milne Bay	34	12,224	0.3	37	11,246	0.3
Oro	85	7,687	1.1	54	7,056	0.8
South Highlands	72	22,728	0.3	61	20,911	0.3
Enga	134	13,364	1.0	113	12,786	0.9
West. Highlands	201	22,525	0.9	150	21,258	0.7
Simbu	110	13,863	0.8	49	12,590	0.4
East. Highlands	525	24,974	2.1	304	22,472	1.4
Morobe	4,634	27,785	16.7	2,279	26,097	8.7
Madang	367	19,952	1.8	183	18,004	1.0
East Sepik	248	19,503	1.3	193	19,502	1.0
West Sepik	–	–	–	–	–	–
Manus	218	2,469	8.8	155	2,281	6.8
New Ireland	250	5,872	4.3	238	5,466	4.3
East New Britain	250	10,701	2.3	197	10,563	1.9
West New Britain	60	8,704	0.7	50	7,453	0.7
North Solomons	1,200	11,440	10.5	1,098	10,773	10.2
TOTAL	9,668	258,001	3.7	6,095	240,357	2.5

Table 8A. Provincial expenditure for primary education, 1983

Province	*Total provincial budget K*	*Provincial education budget K*	*Provincial primary budget K*	*Primary teacher salaries K*
Western	6,909.8	1,705.0	1,184.5	1,036.7
Gulf	4,838.8	1,436.8	1,293.1	1,280.3
Nat'l. Capital	9,214.5	3,177.4	2,042.3	1,662.4
Central	9,538.6	3,410.9	1,787.6	1,616.0
Milne Bay	7,522.1	2,607.0	1,956.4	1,682.8
Oro	6,987.0	2,008.5	1,443.6	1,196.6
South.Highlands	13,862.6	4,562.0	3,047.2	2,835.9
Enga	12,000.0	2,541.0	2,179.0	1,918.0
West.Highlands	9,479.0	4,040.0	3,126.0	2,752.0
Simbu	12,283.9	3,266.7	2,152.8	1,846.6
East.Highlands	16,640.5	4,923.2	3,326.0	3,028.2
Morobe	17,202.3	6,129.0	4,057.6	3,750.6
Madang	11,360.6	4,501.3	2,637.1	2,482.1
East Sepik	13,399.9	4,582.2	3,230.1	2,904.6
West Sepik	9,790.0	3,150.0	1,782.5	1,681.3
Manus	2,753.0	925.3	614.6	584.6
New Ireland	7,943.9	2,786.0	1,610.5	1,528.3
East New Britain	12,112.1	4,237.2	2,769.2	2,677.2
West New Britain	7,780.1	2,856.3	2,184.5	1,971.5
North Solomons	12,372.3	3,092.4	2,233.7	2,104.0
TOTAL	203,991	65,898.2	44,658.3	40,539.7

Table 8B. Provincial expenditure for primary education, percentages, 1983

Province	*Teacher salaries/ primary education budget*	*Other primary education costs*	*Primary education/ provincial education budget*	*Primary education/ provincial budget*	*Provincial education budget/ total provincial budget*
Western	87.5	12.5	69.5	17.1	24.7
Gulf	99.0	1.0	90.0	26.7	29.7
Nat'l. Capital	81.4	18.6	64.3	22.2	34.5
Central	90.4	9.6	52.4	18.7	35.8
Milne Bay	86.0	14.0	75.0	26.0	34.7
Oro	82.9	17.1	71.9	20.7	28.7
South. Highlands	93.1	6.9	66.8	22.0	32.9
Enga	88.0	12.0	75.5	18.2	21.2
West. Highlands	88.0	12.0	77.4	33.0	42.6
Simbu	85.8	14.2	65.9	17.5	26.6
East. Highlands	91.0	9.0	67.6	20.0	29.6
Morobe	92.4	7.6	66.2	23.6	35.6
Madang	94.1	5.9	58.6	23.2	39.6
East Sepik	89.9	10.1	70.5	24.1	34.2
West Sepik	94.3	5.7	56.6	18.2	32.2
Manus	95.1	4.9	66.4	22.3	33.6
New Ireland	94.9	5.1	58.6	20.3	34.6
East New Britain	96.7	3.3	65.4	22.9	35.0
West New Britain	90.2	9.8	76.5	28.1	36.7
North Solomons	94.2	5.8	72.2	18.1	25.0
PNG	90.7	9.3	68.3	22.1	32.4

Table 8C. Per capita education costs, 1983

Province	*Government per capita cost* K	*School fee* K	*Total provincial per capita cost* K
Western	118.80	5.00	123.80
Gulf	161.25	4.00	165.25
Nat'l. Capital	141.70	18.00	159.70
Central	110.20	10.00	120.20
Milne Bay	119.50	4.00	123.50
Oro	149.15	10.00	159.15
South.Highlands	140.10	3.90	144.00
Enga	158.00	5.00	163.00
West.Highlands	132.20	10.00	142.20
Simbu	140.0	8.00	148.00
East.Highlands	129.50	11.50	141.00
Morobe	125.70	12.00	137.70
Madang	124.50	7.00	131.50
East Sepik	124.40	2.00	126.40
West Sepik	152.80	9.00	161.80
Manus	126.50	5.00	131.50
New Ireland	179.60	–	179.60
East New Britain	152.90	4.00	156.90
West New Britain	167.65	16.50	184.15
North Solomons	139.50	9.00	148.50
PNG	139.70	8.10	147.39

Table 9. Special schools, 1983

Province	*No. of one-teacher schools*	*No. of two-teacher schools*	*No. of other teachers with multiple classes*	*Total No. primary Schools*
Western	1	0	0	87
Gulf	6	10	7	70
Nat'l. Capital	0	0	0	33
Central	14	48	20	146
Milne Bay	4	5	16	150
Oro	4	23	21	78
South Highlands	0	8	22	132
Enga	4	6	5	154
West Highlands	2	10	10	92
Simbu	0	2	42	124
East Highlands	1	4	5	89
Morobe	7	25	20	200
Madang	4	11	7	128
East Sepik	5	21	18	116
West Sepik	4	34	7	167
Manus	16	25	21	53
New Ireland	6	23	12	97
East New Britain	1	7	6	117
West New Britain	6	21	24	105
North Solomons	8	23	10	134
TOTAL	93	306	273	2,272

Chapter Four

NATIONAL POLICIES AFFECTING UNIVERSALIZATION OF PRIMARY EDUCATION

The national development strategy

In October 1976 the Papua New Guinea Government published a White Paper outlining a strategy for development in line with national goals. All future development was to be measured against the Eight Aims, which emphasized rural development, self-reliance, more equal distribution of income and benefits, small-scale economic activity, decentralization of decision making, increased participation of women and greater Papua New Guinean control of the economy. The National Development Strategy was a further refinement of these goals. The principles of this strategy are listed below.

Integral human development. Every person should be dynamically involved in the process of freeing himself or herself from every form of domination or oppression so that each man or woman will have the opportunity to develop as a whole person in relationship with others.

Equality and participation. All citizens should have an equal opportunity to participate in, and benefit from, the development of our country.

National sovereignty and self-reliance. Papua New Guinea should be politically and economically independent, and its economy basically self-reliant.

Natural resource conservation. Papua New Guinea's natural resources and environment should be conserved and used for the collective benefit of us all, and to be replenished for the benefit of future generations.

Preservation of national traditions. Development should be pursued primarily through the use of Papua New Guinean forms of social, political and economic organization.

The National Public Expenditure Plan

This plan was outlined in 1977 and introduced in the budget for 1978-1981. It is a rolling plan for four years. The National Public Expenditure Plan (NPEP) represents a first step in a long-term effort to redirect expenditure. There are two important reasons for this long-term approach. The annual budget process can make some marginal changes in expenditure patterns but cannot generate important initiatives for any single year because in any year most of the available funds are already committed by decisions taken in the preceding year. With year-to-year planning there is a tendency to allocate small amounts to all activities, resulting in few visible achievements in any one direction. The rolling four-year structure of the NPEP allows projects to be prioritized by deferring less important projects until later in the plan period.

These considerations led to a new approach to expenditure planning. Expenditure on existing policy will be controlled and limited. In general, total expenditure on current activities by each department has been kept constant in real terms; i.e. appropriations have been increased only to offset the effects of inflation. Second, the limited room for growth in total government expenditures will be reserved for projects in the following strategic areas: aid to less developed areas; improving subsistence agriculture; economic production; food production, marketing and nutrition; urban management; environmental protection; effective administration; increasing Papua New Guinean participation in the economy; rural welfare and rural education.

1977 Education policy

The following policies set by the National Government in 1977 still form the basis of educational planning at the primary level.

1. Education and training are important in improving the well-being of the people by providing access to improved skills. Education must therefore relate to the needs of life in the villages, where the majority of the people live.

2. Universal primary education is one of the major goals of the Government. Approximately 68 per cent of school age children now attend primary schools, and it is the Government's

objective to increase this to 82 per cent by 1980 and 92 per cent by 1985.

3. The education system has expanded very rapidly in recent years and this expansion will continue.

4. One feature of the education system is the great imbalance between males and females enrolled. Although the proportion of girls enrolled in different provinces has changed, there was no national improvement in the proportion of girls enrolled in grade 1 from 1970 to 1975 (grade 1 enrolments by sex are shown in the Appendix). Further initiatives are required, particularly at the provincial level, to increase the proportion of girls enrolling and continuing in school.

1978 Education policy

The policy of equity was established in this year, and the goal of universal primary education clearly stated. Through community education Papua New Guinea hoped to develop literacy and numeracy among all its people. These skills are essential to the success of extension programmes aimed at rural areas. Through adult education courses and non-formal education programmes the Government aimed to make these skills available to both adult and juvenile students. Increased involvement of females in community education programmes was also planned.

To achieve the goal of universal primary education the National Government decided to commit a significant proportion of the NPEP over the following eight years. The community education budgets were given a 5 per cent growth ceiling, meaning that the total community education budget of K30 million would reach K36.5 million in 1982 and K44.3 million by 1986 at constant 1978 prices. This rate of expenditure would allow the achievement of universal entry to community school education by 1996. It would also enable the Ministry of Education to develop a longer-term plan for community education. Such a plan would include provisions for expansion of schools, teacher education, in-service training, inspection and curriculum development.

In the process of expansion the highest priority would be given to those provinces with below-average access to community school education. Continued emphasis would be placed on the

development of community school structures and curriculum to meet the needs of rural communities.

1979 Education policy

It was decided in 1979 that from the beginning of 1980 there would be a new policy initiative. The money set aside for universal primary education had previously been reserved for access to education and for retention, but now other aspects would be covered. Provincial governments by 1979 were having more say in policy setting. They were able to request funds for a variety of projects, including water tanks, library books, resource centres and teacher housing improvements. This was a change from the previous National Executive Council policy, which stated that all structural facilities for community education were a community responsibility. To the extent that funds were allocated to these activities the less likely it would be that Papua New Guinea could achieve universal entry to community education by 1996. It was therefore necessary for the National Executive Council to reconsider this policy area during 1980. If the new policy initiative were rejected, universalization could be reached by 1996 but provincial governments would be disappointed, arguing that the qualitative aspects of community education needed to be improved. Some provinces, particularly in the highlands, were having trouble retaining or attracting teachers, and would not have been able to achieve their targets unless moves were made to upgrade their facilities.

The 1980 review would be critical because if the National Executive Council maintained existing policy, the allocated funds will be insufficient to meet the proposed target. The target, however, could be achieved at lower standards. If the Council changed the existing policy, more funds would have to be allocated to achieve the target or else the target date would have to be postponed.

1980 Education policy

In 1980 the education policy was widened for 1981. The 1996 target date was retained. In support of this goal the total community education budget was allowed to grow at 5 per cent a year in real terms. This would permit the development of a longer-term education plan with provision for expansion of community schools,

teacher education, inspection, curriculum development and funding for less advantaged provinces.

The main problem in 1981 was that the supply of trained teachers was well behind target because of a lack of graduates from provincial high schools. There also continued to be some pressure from the provinces to spend increased resources on projects designed to increase the quality of community education. The Governments' inability to train enough teachers and the desire of the provinces to concentrate on improving educational standards rather than access and retention could work against achieving universal primary education by 1996.

In addition to allocating funds for the expansion of community education, the Government initiated a major programme in the 1981-84 NPEP designed to improve standards in community education. This programme, to be financed by the World Bank, included projects to:

1. Improve and expand the capacity of Port Moresby In-Service-Training College to upgrade community teacher skills

2. Develop and test text books appropriate to community school curricula

3. Construct a building to house the Standards Division of the Department of Education

4. Expand the capacity of the Department of Education printing facilities.

The Department of Education also planned to establish and expand a staff development and localization programme to train provincial education planners, teachers' college lecturers, curriculum writers and audio-visual personnel. This initiative was a major step in the development of a policy to improve standards within the education system and to lessen dependence on expatriate manpower in key areas.

Free primary education

In 1981 the Government decided to establish a free primary education scheme to be introduced in 1982 as a major incentive towards universal primary education. However, the amount of money

proposed for this scheme was reduced and the target date was unrealistic. The idea of this plan was that schools would be subsidized by the Government rather than by the usual school fees collected by the Boards of Management.

Under the Organic Law, a provincial government had the right to accept the money or reject it. Five provinces in early 1982 decided not to accept it. Some believed that parents should pay a small fee to help contribute to the cost of education. Others objected that the amount offered was calculated on the basis of actual fees charged in 1981, and that there should be a flat rate for all provinces. In some provinces the funds were badly administered and most schools did not receive the money. Many schools continued to charge fees and so the whole programme suffered many problems in 1982.

A new Government was elected in 1982 and replaced the free primary education scheme with a fee subsidy scheme. Under this system, provinces could decide if the subsidies would be used for primary or secondary, and state the amount each school should get. Cheques were then to be sent to each school early in 1983. This idea met with immediate acceptance in all provinces. The money has largely been used to subsidize high school boarding fees. Only two provinces have maintained free primary education, but all others have allocated some of the subsidy towards community school fees. This should be an incentive for universal primary education.

Target dates for universal primary education

In 1978 the target set for universal primary education was 1996. The following table shows the desired progression to universal enrolment in grade I and the desired consolidated retention rate in grades I-VI from 1978-1990.

Year	Estimated 7-Year-Old Population	Grade I Intake	% of 7-Year-olds Enrolled	Grades I-VI Enrolment	Estimated 7-12-Year-Old Population	% of 7-12-Year-Olds Enrolled
1978	85,150	55,084	64.6	247,753	465,465	53.2
1979	88,139	60,375	68.4	248,049	481,976	51.5
1980	91,129	64,019	70.2	258,282	498,486	51.8
1981	94,119	68,095	72.3	267,537	513,441	52.1
1982	97,819	73,934	75.5	284,638	528,844	53.8
1983	101,519	83,371	82.1	304,614	544,709	55.9
1984	105,220	88,424	84.0	330,529	561,050	58.9
1985	108,920	93,729	86.1	352,259	577,881	60.9
1986	112,620	96,769	85.9	375,434	595,217	63.1
1987	115,336	102,549	88.9	399,091	613,072	65.1
1988	118,052	108,702	92.0	423,934	631,464	67.1
1989	120,768	117,591	97.3	451,030	651,408	69.2
1990	123,484	123,484	100.0	480,581	669,920	71.7

Teacher education

One of the reasons why the 1996 target will be difficult to achieve is the fact that sufficient teachers cannot be trained. The required number of grade X graduates to train as teachers cannot possibly be met without a major and costly expansion of high schools, but Provincial Governments have shown that they are interested in a slower rate of progress. One earlier recommendation was to use a large number of teacher aides, but educationalists argued that although this could help to improve access, the standard of education would fall, so the plan was never implemented. Currently the National Government is committed to training the number of teachers requested by the Provincial Governments in their five year plans.

Training college enrolment for 1983 was slightly more than 1800 and the lecturing staff was only 129. This is a staff – student ratio of 1:14. One way to improve the quality of teacher training would be to reduce this ratio over a period of four years to 1:12. The two following tables show the number of places available and the staffing requirements for teacher training colleges.

Evaluation

An Evaluation Unit has been established within the National Department of Education to monitor the progress of primary education against 1982 base-line data. This includes all aspects of universalization. The Unit is also charged with training officers of Provincial Division of Education in evaluation techniques. The work of the Unit has resulted in heightened awareness of the need for continuous project evaluation.

Training of primary education personel

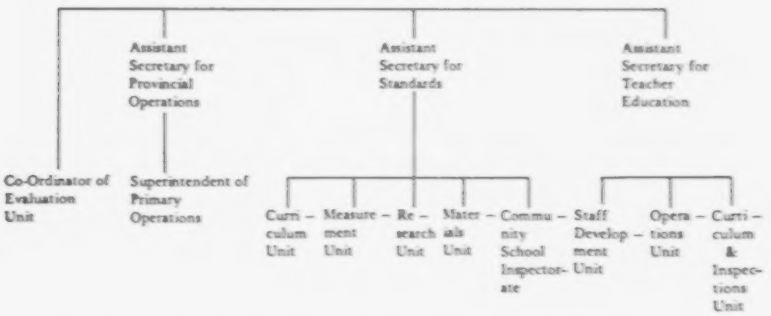
National Department of Education officers include the permanent Secretary, his senior executive staff (heads of the three branches of the Department), and the officers of the General Education Services (see page 79).

Primary teacher training college places

Year	*Pre-service*	*In-Service*	*Total*	*Recommendation*
1977	1,962	150	2,112	
1978	1,892	170	2,062	
1979	1,927	177	2,104	Policy decision, expansion of places for 1982
1980	2,102	187	2,289	Policy decision, expansion of places for 1983
1981	2,018	196	2,214	100 places for 1982
1982	2,540	205	2,745	500 places for 1983
1983	3,056	216	3,272	Policy decision, expansion of places for 1985-86
1984	3,014	223	3,237	200 places for 1985, policy decision 1986
1985	3,213	242	3,455	200 places for 1986, policy decision 1987
1986	3,396	257	3,653	200 places for 1987, policy decision 1988
1987	3,589	274	3,863	150 places for 1988, policy decision 1989
1988	3,733	292	4,025	
1989	3,713	310	4,023	
1990	3,695	330	4,025	

Staffing requirements in primary teacher training colleges, 1977-1990

Year	*Total places*	*Teacher-student ratio, pre-service*	*Teacher-student ratio, in-service*	*Staff required*	*Recommendation*
1977	2,112	1:15	1:10	141	
1978	2,078	1:15	1:10	144	
1979	2,104	1:15	1:10	146	
1980	2,289	1:15	1:10	158	Make policy
1981	2,214	1:15	1:10	154	decisions and
1982	2,745	1:15	1:10	189	carry out
1983	3,272	1:15	1:10	225	recruitment
1984	3,237	1:15	1:10	223	programmes
1985	3,455	1:15	1:10	238	as appropriate
1986	3,652	1:15	1:10	252	
1987	3,863	1:15	1:10	266	
1988	4,025	1:15	1:10	278	
1989	4,023	1:15	1:10	278	
1990	4,025	1:15	1:10	279	



In addition, various officers are involved in the Planning Services Division:

At the provincial level, there is a Minister of Education, an Assistant Secretary for Education and a Provincial Education Planner. At the institutional level there are teachers' college principals and lecturers, community school headmasters and teachers, and the 120 community school Inspectors. Primary education personnel at the community level include the members of Boards of Management, parents and community members in general.

All the personnel above need training of various kinds to be able to promote universalization of primary education. There is no overall plan to date for meeting such broad training needs. At present the National Department of Education trains provincial education planners through a degree and a diploma course in educational planning, and supplies some training in evaluation techniques. Soon provincial officers will be trained in writing project proposals to help in all aspects of universalization. The Minister for Education holds an annual conference for provincial Education Ministers and there some training needs are met. Similarly, the Secretary of the Department of Education meets annually with the Assistant Secretaries of provincial education divisions. Some provinces are talking of training sessions for members of Boards of Management, but little more than this is being done as yet at the provincial level.

More effectively planned and co-ordinated training at various levels would in the long term improve the chances of actually implementing successfully the national policy of achieving universal

primary education early in the next century. While the Department of Education is relatively strong in planning for this, it is relatively weak in training education personnel in implementing UPE at the national and the provincial levels. The following steps might be considered:

1. A detailed outline of the existing programme for achieving universal primary education should be prepared. While many activities are underway no up-to-date and comprehensive statement exists.

2. Personnel at all levels, from the Secretary for Education to teachers, who have a role in implementing universalization of primary education should be identified and their activities described. This should include officers in the National Department of Education as well as officers in particular provincial projects.

3. The effectiveness of the work of each of the officers identified above should be assessed. Criteria might include such diverse indicators as awareness of the relationship of the officer's job to universalization and the officer's general agreement with the goal.

4. Once the functions of existing officers have been described and analyzed, it might be possible through further analysis, discussions and comparisons with other countries to identify additional personnel or functions that could further develop universal primary education.

5. The next step would be to review all present training activities for education officers. If training does not at present develop the skills needed to promote universalization, it should be altered. Proposals could also be made to develop new training for particular roles. Are teachers, for example, aware of their role in the development of universal primary education? Are they aware of its importance. Does the typical pre-service teacher training programme include any mention of this role? Are specific skills or techniques for encouraging universalization developed? Do inspectors or in-service sessions address activities related to universalization once the teacher is on the job? What training activities would most likely increase teacher effectiveness with regard to implementation of this policy? A similar exercise carried out with a sample of other key officers would assist in identifying additional training needs in this area.

6. The next step would be the actual development of new or revised training programmes. In many cases the trainers will themselves need training, particularly if their work has not previously been strongly related to universalization of primary education.

7. If new or revised training programmes emerge, their long-term effectiveness should be monitored so that the programmes can be updated and revised as necessary.

Chapter Five

PROGRAMMES AND PROJECTS

Improvement of community school education is very important for the development of Papua New Guinea because community schools produce citizens who can read and write and therefore contribute more to the nation. The government has set as one of its goals the achievement of universal primary education by the end of this century. Several projects are being implemented in order to help achieve this goal.

The Education II Programme

The government has allocated K25 million in addition to the normal community school costs for use through 1987. This money is intended to strengthen the activities of the departments concerned with community schools. About one half is being provided by a loan from the World Bank. The Department of Education has prepared a detailed plan called Education II, which describes a number of projects to improve educational management, increase the quality of community school education and increase community school enrolment. Education II is carefully designed to develop and reinforce present priorities within existing divisions of the Education Department, and is closely built into the Department's structure. The projects included in Education II are listed and briefly described below:

1. **Regional Planning Advisors.** Regional Planning Advisors are based in Port Moresby, Madang, Mount Hagen and Kieta. Their job is to assist provincial education staff in the preparation of detailed education plans for each province.

2. **Diploma In Educational Studies (Planning).** Education II is providing a full-time lecturer in Education Planning at the University of Papua New Guinea. He will organize and teach a basic diploma

course in planning for selected provincial staff. The course will relate directly to the practical concerns of the provincial education planners and will involve the Regional Planning Advisors.

3. **Integration of curriculum development and in-service training.** This project aims to develop ways to more effectively integrate the programmes of the Curriculum Development Unit and the Port Moresby In-Service College. It provides funds for a new Standards Division Building near the College.

4. **Provincial Primary Education Fund.** This fund can be used by provinces to finance specific projects that fit into their education plans and meet criteria such as relevance, feasibility and efficiency. The aim of the Fund is to improve the quality of community school education and increase the number of students who finish primary school. Provinces will be assisted in identifying projects, preparing detailed proposals and designing evaluation. Such projects might include resource centre development, in-service teacher training or development of curriculum materials.

5. **Development of training college staff.** The Teacher Education Division is attempting to increase the level of localization in the training colleges by systematically raising the level of confidence and competence of Papua New Guinea lecturers and associates. Education II is providing the Division with an additional staff member whose job is to assist teacher training college staff in the development of their professional skills in the planning and implementation of a programme.

6. **Low-cost School Construction Adviser.** Education II provides a full-time adviser in the provinces on the design and construction of low-cost schools and teacher housing. This project aims to reduce the cost of expanding community school enrolment.

7. **Textbook development.** Textbooks for mathematics, community life and health are being prepared by the Curriculum Unit as part of Education II and will be tested and distributed during the next three years. The completed books will be published commercially and made available to the provinces.

8. **Educational resource centres.** Education II is providing an advisor on the development of educational resource centres to the Materials Section of the Curriculum Unit. This advisor travels extensively

in the provinces to describe what resource centres might offer in terms of in-service, curriculum development and teaching materials development, and assists with the operation of existing centres and the planning of new ones.

9. **Measurement Services Unit.** Additional staff for this unit are being provided by Education II to help produce better measures of student achievement and increase data analysis capacity. This Unit helps to develop teachers' skills in testing, improve the quality of examinations and provides analyses of test results as an aid to curriculum development and planning.

10. **Improvement of In-Service College facilities.** Education II is funding the construction of a library, staff offices, audio-visual facilities and new hostel accommodation at the In-Service College. Special emphasis is to be placed on training teachers in the use of media.

11. **Audio-Visual aid development.** The Curriculum Unit will be able with Education II financing to improve its facilities and staff for the development of simple audio-visual aids. Staff will be trained to instruct teachers in preparing instructional aids for the classroom.

12. **Improvement of printshop facilities.** Education II funds will be used to relocate the educational printshop to the new Standards Division building. Curriculum developers and audio-visual technicians will have easier access to the facilities and will be able to produce materials more efficiently.

13. **School library development.** Education II will contribute to the improvement of community school library facilities and assist in developing library management skills in teachers.

14. **Evaluation Unit.** The Evaluation Unit is responsible for the overall evaluation of the projects of Education II. It will assist the projects in identifying the types of information needed to assess their development. The Unit will co-ordinate the collection of this information and ensure that it is fed back into the project development process. It will also help to provide in-service training in basic evaluation techniques to national and provincial staff.

The agriculture pilot project

The overall aim of this project is to provide a more useful and realistic education for community school children, especially in the area of agriculture. The prime concern is to develop teaching methods that will reinforce the current goals of community education.

The Community School Agriculture Pilot Project is based on the following assumptions:

1. Learning situations in community schools should be linked closely to local knowledge, materials, people and aspects of the local environment.

2. Practising teachers are the best people to initiate ideas and methods that will make learning relevant and meaningful for students in their own area.

3. If teachers are given suitable encouragement and support, they can develop their ideas to such a level that they will have an effect in improving community school education.

4. Ideas and suggestions developed by project teachers can be documented to help teachers in other areas to develop similar ideas.

The project is designed to encourage primary-level teachers to connect learning experiences to environmental situations. Because agriculture is such an important and familiar part of every rural child's experience, agriculture in project schools will play a very large part in all learning activities. The project aims to improve learning in all subject areas by making it more relevant, improving students' knowledge of and skills in village-level agriculture, and educating young people to more easily fit into community life. All students who leave grade VI should feel equipped with knowledge and skills useful either for village life or further education. The objectives of the programme concern the school, the teachers and the students.

Objectives for the school and community

1. To provide and maintain, in each community school, a school garden based on the pattern of a good subsistence garden of the local area to be used as a teaching resource; and

2. To strengthen the relationship between school and community by involving the community in the school activities and explaining the project aims and objectives to the community.

Objectives for teachers

1. To train teachers to use community resources in their teaching;

2. To train teachers to use the school garden as teaching resource for all subjects;

3. To train teachers to maintain a school teaching garden;

4. To encourage teachers to develop their own ideas to improve their lessons; and

5. To improve teacher initiative, organization and planning.

Objectives for students

1. To preserve and increase students' interest in and respect for local activities and customs, such as gardening;

2. To improve students' skills and knowledge in all subject areas through more interesting and meaningful teaching methods;

3. To improve students' practical gardening skills and knowledge; and

4. To improve students' ability to apply the knowledge and skills gained in subjects such as mathematics and English to practical village situations and problems.

Provincial projects

There are a few projects being carried out by provinces to help develop all aspects of community education:

Provincial Maths Group. In 1983 West New Britain formed a Mathematics Group to improve the standard of maths attainment in schools throughout the province. The Group plans to help primary teachers to better understand the maths syllabus, to devise maths exercises for all grades and maths examinations for the upper grades in particular, and to develop teaching materials in maths for all schools.

Uniform testing system. Learning in community schools is measured in two ways. A grade VI examination is set nationally to determine which students will go on to high school. A second type of examination is set and conducted by teachers as part of their on-going measurement of students' progress in each grade. These teacher tests vary from teacher to teacher and school to school, and need to be made more uniform throughout the provinces. Teachers' testing skills also need to be upgraded.

To address this need, a testing committee was planned for 1983 in Morobe Province to work out details and costs of a uniform testing system. The members of this committee may include community school teachers, high school teachers, teachers' college lecturers, inspectors, officials of the Division of Education and any other interested persons recommended by the Provincial Education Board. The Measurement Services Unit in Port Moresby would provide technical advice.

The testing programme will most likely be phased into the schools in the following way:

Grade V	–	1984
Grade IV	–	1985
Grades II and III	–	1986
Grade I	–	1987

Testing skills for teachers would be worked into the overall programme of in-service training. The cost of the testing system would be included in the subsequent drafts of the Education Plan.

Interpretation of school curricula. Many community school teachers have difficulty in understanding parts of the curriculum and are often confused when the curriculum is changed. At times aspects of the curriculum are changed before they have been fully implemented. Each province has a Curriculum Advisor but in recent years this position has been more a training ground for new inspectors than an advisory unit on curriculum. Teachers need more help with curriculum interpretation if they are expected to pass on the knowledge and skills required in community schools.

Morobe Province plans to provide systematic assistance to teachers in understanding the community school curriculum. Under this plan the Provincial Education Board would review the job description of the Curriculum Advisor so that he would become the co-ordinator of all curriculum matters and assist teachers in areas of difficulty. He would prepare materials and newsletters on curriculum in-service training. The province would request that the National Department of Education mount a training programme for Curriculum Advisors so they could better do their jobs. The Curriculum Advisor would also be given a grant to enable him to travel to schools to discuss curriculum materials with groups of teachers.

Rabaul Public Library. There is a public library in the town of Rabaul. The Division of Education is encouraging the six librarians who work there to go out to community schools and assist teachers to establish school libraries. So far a number of community schools have built separate buildings for libraries. Provincial In-Service Officers are also assisting schools by ordering library books at reasonable prices.

The Film Unit. The Film Unit in Rabaul is beginning to produce educational films for teacher training. It is also copying tapes and storing them for loan to schools and individuals.

Cultural Unit. The Cultural Unit is also printing reading books in local languages for children in lower grades.

Conclusion

Papua New Guinea has not to date made much headway in achieving universal primary education. Access is improving but retention is not, and grave doubts have been expressed in recent years about the quality of achievement of students completing grade VI. A large campaign has been mounted through the Education II programme, the three community education programmes and the new pilot project in agriculture. All officers, from the Secretary for Education down to the classroom teacher, and all parents and community members must now co-operate to ensure that Papua New Guinea can and will achieve universalization of primary education by the end of this century.

APPENDIX

Comparative Statistics, 1970-1983

Table 1. Age-group populations

Year	7-year-old population			7-12-year-old population		
	Boys	Girls	Total	Boys	Girls	Total
1975	39,176	37,484	76,660	215,217	204,432	419,649
1980	46,549	44,566	91,115	256,743	241,743	498,486
1983	47,315	43,183	90,498	268,083	248,005	516,088

Table 2. Primary education institutions

Year	Number of Schools	Enrolment			Number of teachers
		Boys	Girls	Total	
1960	1,187	–	–	88,696	–
1965	1,814	111,266	70,981	182,247	–
1970	1,620	131,885	76,534	208,419	6,606
1975	1,762	149,303	89,015	238,318	7,544
1980	2,045	167,077	118,073	285,150	9,063
1983	2,272	185,763	141,251	327,014	10,307

Table 3. Girls enrolled in grade I

Year	Girls enrolled in grade I	Age-group population	Percentage of age-group girls enrolled
1965	16,954	Not Available	–
1970	16,951	Not Available	–
1975	19,700	37,484	52.6
1980	26,561	44,566	59.6
1983	33,600	43,183	77.8

Table 3A. Girls enrolled in grades I-VI

Year	*Girls enrolled in grade I-VI*	*Age-group population*	*Percentage of age-group girls enrolled*
1965	70,981	Not Available	–
1970	76,534	Not Available	–
1975	89,015	204,432	43.5
1980	118,073	241,743	48.8
1983	141,251	248,005	57.0

Table 3B. Percentage growth rate in enrolment of girls over five-year periods

Period	*Enrolment at beginning*	*Enrolment at end*	*Total growth*	*Average yearly growth*
1965-1970	70,981	76,534	7.8%	1.6%
1970-1975	76,534	89,015	16.3%	3.3%
1975-1980	89,015	118,073	32.6%	6.5%
1980-1983	118,073	141,251	19.6%	6.5%

Table 4. Boys enrolled in grade I

Year	*Boys enrolled in grade I*	*Age-group boys in population*	*Percentage of age-group boys enrolled*
1965	24,604	Not Available	–
1970	27,765	Not Available	–
1975	32,212	39,176	82.2
1980	35,604	46,549	76.5
1983	42,746	47,315	90.0

Table 4A. Boys enrolled in grades I-VI

Year	*Boys enrolled in grades I-VI*	*Age-group boys in population*	*Percentage of age-group boys enrolled*
1965	111,266	Not Available	–
1970	131,885	Not Available	–
1975	149,303	215,217	69.4
1980	167,077	256,743	65.1
1983	185,763	268,083	69.3

Table 4B. Percentage growth-rate in enrolment of boys over five-year periods

Period	*Enrolment at beginning*	*Enrolment at end*	*Total growth*	*Average yearly growth*
1965-1970	111,266	131,885	18.5%	3.7%
1970-1975	131,885	149,303	13.2%	2.6%
1975-1980	149,303	167,077	11.9%	2.4%
1980-1983	167,077	185,763	11.2%	3.7%

Table 5. Total enrolment in grade I

Year	*Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*
1965	41,558	Not Available	–
1970	44,716	Not Available	–
1975	51,912	76,660	67.7
1980	62,165	91,115	68.2
1983	76,346	90,498	84.4

Table 5A. Total enrolment in grades I-VI

Year	*Enrolment*	*Age-group population*	*Percentage of age-group population enrolled*
1965	182,247	Not Available	–
1970	208,419	Not Available	–
1975	238,318	419,649	56.8
1980	285,150	498,486	57.2
1983	327,014	516,088	63.4

Table 5B. Percentage growth-rate in total enrolment over five-year periods

Period	*Enrolment at beginning*	*Enrolment at end*	*Total growth*	*Average yearly growth*
1965-1970	182,247	208,419	14.4%	2.9%
1970-1975	208,419	238,318	14.3%	2.9%
1975-1980	238,318	285,150	19.6%	3.9%
1980-1983	285,150	327,014	14.7%	4.9%

Table 6. Teacher student ratios

Year	*Average number of students per school*	*Average number of students per teacher*	*Average number of teachers per school*
1965	100.5	Not Available	Not Available
1970	128.7	31.5	4.1
1975	135.3	31.6	4.3
1980	139.4	31.5	4.4
1983	143.9	31.7	4.5

Notes to Tables

1. *Tables 3-4B*

Until 1970 the growth rate for boys in school exceeded that of girls. Since then, however, much attention has been paid to the enrolment of girls. From 1975 to 1980 the growth rate for girls in school was nearly double that of the birth rate for girls in the country. The overall growth in schools just equalled the overall birth rate. This meant, that enrolment of boys did not equal their birth rate in growth. For a long period there was no improvement in the percentage of the school age population attending school. The larger percentage of total primary enrolment for 1983 is mainly due to new census figures that showed that the birth rate was not as high as anticipated. Projected populations between 1970 and 1982 were higher than actual populations, and this has led to the increase in the most recent figures.

2. *Table 6*

The average class size, or teacher:student ratio, has remained very constant. This is disappointing for purposes of universalization of primary education, which will not be achieved unless class sizes grow due to children being retained in school and the drop out rate decreasing noticeably.

Schools have not grown much in average size, even though most of them now include grades I-VI. Again, the drop-out rate has affected school size. The average number of teachers per school is steadily growing due to the blocking up of schools with grades I-VI, but will rise slowly because of the number of small schools in sparsely populated areas and much multiple class teaching.

SELECTED APEID PUBLICATIONS
RELATING TO UNIVERSALIZATION OF PRIMARY EDUCATION

* *Universalizing education: linking formal and non-formal programmes; report. 1979.*
* *Universalizing education: strategies for development and use of instructional materials; report. 1979.*
* *Universalizing education: selected innovative experiences: new techniques for preparing educational personnel. 1980.*
* *New personnel profiles in relation to changes in society and educational systems. 1980.*

In-service teacher education: developing innovatory strategies and instructional materials; report. 1980.

* *Designing instructional materials for general education and teacher training: a portfolio of experiences in Asia and Oceania. 1980.*
* *Preparing educational personnel: training methodologies based on locally available learning resources; report. 1980.*

Linking science education in real-life; curriculum design, development and implementation; report. 1980.

Towards better health and nutrition; report. 1981.

Social changes and new profiles of educational personnel; national studies: India, Nepal, Philippines, Republic of Korea. 1981.

Report of the study group meeting on evaluation and development of innovative methods of teaching with reference to problems of multiple classes and disadvantaged groups. 1981.

Integrating subject areas in primary education curriculum—a joint innovative project; report. 1982.

Distance learning for teacher education; report. 1982 (3 vols.)

Multiple class teaching and education of disadvantaged groups; national studies: India, Sri Lanka, Philippines, Republic of Korea. 1982.

Learning needs and problems in primary education; report. 1983 (2 vols).

Training of educational personnel for integrated curriculum; report. 1984.

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* Out of stock.

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4. Education and rural development;
5. Education and urban development;
6. Educational technology with stress on mass media and low-cost instructional materials;
7. Professional support services and training of educational personnel;
8. Co-operative studies, reflections and research related to educational development and future orientations.